

ARGUMENT REALIZATION, CAUSATION AND EVENT SEMANTICS IN KIWOSO

By



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DECLARATION

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ABSTRACT

This study investigates the properties of change of state and change of location/position verbs in relation to argument realization, (anti-)causative alternation, and event semantics in Kiwoso. To execute this study, firstly, a representative sample of change of state and change of location/position verbs as outlined by Levin (1993) were identified with regard to their syntactic and semantic characteristics. The data were gathered through introspections, complemented by other native speakers' acceptability judgements, and text collection. The study adopts syntactic decomposition approach as postulated by Alexiadou et al. (2006, 2015) and Alexiadou (2010). Given that an adequate explanation of the syntactic behaviour of alternation constructions in Kiwoso is contingent on aspectual verb class distinctions, Vendler's (1957) aspectual approach as developed further by Verkuyl (1972) and Smith (1997) is invoked. The two approaches are supplemented by Distributed Morphology, Minimalism, and Cartography.

Research on the (anti-)causative alternation focuses on two central issues: firstly, the lexical semantic properties that determine verbal alternations, and the derivational relationship between the alternates, and secondly, the similarities between (anti-)causative, passive, and middle alternations. This study demonstrates that both externally and internally caused change of state verbs, as well as change of location/position verbs productively alternate in Kiwoso. The findings of the study establish that participation of verbs in (anti-)causative alternation is determined by the encyclopaedic lexical semantics of verb roots. The results illustrate that the causative variants of externally caused change of state verbs in Kiwoso are morphologically marked, but the anticausative alternates are unmarked. The study demonstrates further that both causative and anticausative variants of internally caused change of state, and change of location/position verbs are morphologically unmarked in Kiwoso.

The study findings demonstrate that categorization of verb roots into semantic and aspectual verb classes is mainly determined by an incremental theme argument, and the grammatical aspect. In addition, the findings establish that an applicative suffix has an effect on the aspectual property of change of location/position verbs in Kiwoso. The results of the study demonstrate that realization of an external argument is determined by the lexical semantic property of verb roots. The findings establish that verbs which denote human-oriented events realize an agent and instrument arguments, but not causers, whereas other verbs realize agent, instrument, and

causer arguments. The findings demonstrate that anticausative, passive, and middle constructions are syntactically similar in that they do not express the syntactic external (subject) argument, but they are semantically different aspects. The general findings of the study suggest that alternating verbs in Kiwoso are compositionally built in the syntax. This makes derivational approaches inadequate in accounting for the properties of these verbs. Therefore, the study adopts the family of generative syntax approaches which adequately account for the properties of these verbs in alternation constructions.

OPSOMMING

Hierdie studie ondersoek die eienskappe van verandering van toestand en verandering van plek/posisie werkwoorde met betrekking tot argument realisering, die (anti-)kousatief, alternasie en gebeurtenis semantiek in Kiwoso. In die uitvoering van die studie is, eerstens, ‘n verteenwoordigende hoeveelheid van verandering van toestand en verandering van plek/posisie werkwoorde, soos beskryf in Levin (1993) geïdentifiseer vir Kiwoso met betrekking tot hulle sintaktiese en semantiese kenmerke. Die data is versamel deur introspeksie van die navorser en aangevul met die taalkundige intuïsie van eerstetaalsprekers van Kiwoso asook die raadpleging van Kiwoso tekste. Die studie aanvaar die sintaktiese dekomposisie benadering soos gepostuleer deur Alexiadou et al (2006, 2015) en Alexiadou (2010). Gegee dat ‘n adekwate verduideliking van die alternasiekonstruksies in Kiwoso afhanklik is van aspektuele werkwoordklas onderskeidings, Vendler (1957) se aspektuele benadering, soos verder ontwikkel deur Verkuyl (1972) en Smith (1997) word ingespan in die studie. Hierdie twee benaderings word verder aangevul deur die teorieë van Verspreide morfologie (‘Distributed morphology’), Minimalisme en Kartografie.

Navorsing oor die (anti-)kousatief alternasie fokus op twee sentrale vraagstukke, naamlik, eerstens, die leksikaal-semantiese kenmerke wat werkwoordelike alternasies bepaal, en die afleidingsverwantskap tussen die alternasies, en tweedens, die ooreenkomste tussen (anti)kousatiewe, passief en middel alternasies. Die studie demonstreer dat sowel eksterne as interne verandering van toestand asook verandering van plek/posisie werkwoorde produktief alterneer in Kiwoso. Die bevindings van die studie toon dat die deelname van werkwoorde in die (anti)kousatief alternasie bepaal word deur die ensiklopediese leksikale semantiek van werkwoord wortels. Die resultate illustreer dat die kousatiewe variante van eksterne veroorsaakte verandering van toestand werkwoorde in Kiwoso word morfologies gemerk, maar die antikousatiewe is ongemerk. Die studie demonstreer voorts dat sowel kousatiewe en antikousatiewe variante van intern veroorsaakte verandering van toestand werkwoorde en verandering van plek/posisie werkwoorde in Kiwoso is morfologies ongemerk.

Die bevindings van die studie demonstreer dat die kategorisering van werkwoordwortels in semantiese en aspektuele werkwoordklasse hoofsaaklik bepaal word deur ‘n inkrementele tema argument, en grammatikale aspek. Voorts bevestig die bevindings dat ‘n applikatiewe suffiks ‘n effek het op die aspektuele eienskappe van verandering van plek/posisie werkwoorde in Kiwoso. Die resultate toon voorts dat die realisering van die eksterne argument bepaal word

deur die leksikaal-semantiese eienskappe van die werkwoordwortel. Die bevindings bevestig ook dat werkwoorde wat mens-georiënteerde gebeurtenisse aandui, agent en instrument argumente, realiser, maar nie oorsaak argumente nie, terwyl ander werkwoorde agent, instrument en oorsaak argumente realiser. Die bevindings demonstreer verder dat antikousatiewe, passief en middel konstruksies sintakties ooreenstem in soverre dit nie die sintaktiese subjek argument uitdruk nie, maar semanties verskillende aspek toon. Die Algemene bevindings van die studie suggereer dat alternerende werkwoorde in Kiwoso word komposisioneel gebou in die sintaksis. Dit maak afleidingsbenaderings ontoereikend in die verklaring van die eienskappe van hierdie werkwoorde. Dus aanvaar hierdie studie verskillende generatiewe sintaksis benaderings wat die eienskappe van die werkwoorde in alternasiekonstruksies toereikend kan verklaar.

DEDICATION

To my daughter, Comfort Josphat Siame.

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APPENDIX A

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Abbreviations and symbols

Adv	Adverbial
Agr	Agreement prefix
AGRo	Object agreement
AGRs	Subject agreement
APPL	Applicative
ASP	Aspect
CAUS	Causative morpheme
DM	Distributed morphology
DP(s)	Determiner phrase(s)

DP _{+loc}	Subject argument with locative morphology
DP _{-loc}	Subject argument without locative morphology
DS	Deep structure
EXT	Extensions
F	<i>For</i> -phrase
FRT	Future tense
FV	Final vowel
GB	Government and binding
HAB	Habitual morpheme
I	<i>In</i> -phrase
INF	Infinitive morpheme
INIT	Initial element
LF	Logical form
LOC	Locative affix
Loc-subject	Locative-subject
NEG	Negation
Obj	Object
PASS	Passive
PERF	Perfective morpheme
PF	Phonological/phonetic form
POSS	Possessive
PRES	Present tense
PROG	Progressive aspect
REFL	Reflexive
REL	Relative
SM	Subject marker
SS	Surface form
STAT	Stative
Subj	Subject
S-V-Agr	Subject-verb agreement
V	Verb
VIDMs	Verbs of inherently directed motion

Abbreviations for grammatical persons

1SG	First person singular
2SG	Second person singular
3PL	Third person plural
3SG	Third person singular

Notations used in the illustrations

#	Anomaly construction
✓	Acceptable constructions
(*...)	Unacceptable construction
?	Marginally acceptable
1, 2, 3, etc.	Number for noun classes
Ø	Unrealized element

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CHAPTER 1

INTRODUCTION

1.1 Introduction and background information

This study aims to present an account of various argument alternation constructions and its interaction with causation and event semantics in Kiwoso¹. It seeks to explore the applicability and suitability of syntactic decomposition approach, particularly the proposals by Alexiadou et al. (2006, 2015) and Alexiadou (2010). The study presents a unified analysis of different argument alternation constructions and their associated argument realization properties in terms of the functional categories of Voice, vCause and Root, as assumed in the syntactic decomposition approach. In presenting an account of these argument alternations, Vendler's (1957) aspectual approach as developed further by Verkuyl (1972) and Smith (1997) is invoked (cf. chapter 3, section 3.7). Consideration of aspectual verb class semantics are included in the examination of (anti-)causative alternations for the reason that an adequate explanation of the syntactic behaviour of (anti-)causative constructions is contingent on aspectual verb class distinctions. Syntactic decomposition approach is further complemented by generative syntactic theories, particularly the Minimalist version of generative syntax (Chomsky 1995, 2000, 2001), and the Cartographic approach to generative syntax (cf. Rizzi 1997, 2013; Cinque 1999, 2002; Cinque & Rizzi 2008; Shronskey 2010). Minimalist and Cartographic perspectives are invoked for the reason that these two generative approaches provide a rich architecture to account for argument alternation with change of state and change of location/position verbs, particularly in relation to syntactic representation of functional head projections, and agreement features.

Linguists generally consider the relationship between the lexical semantics of a verb and its argument realization a complex, hence requires systematic categorization in human languages. It has been generally acknowledged in research that every verb has an argument structure (i.e. the specified number and types of arguments a verb requires) (Haegeman 1991; Radford 1997, 2004; Williams 2015, among others). As discussed in Gruber (2001), Gruber (1965) and Fillmore (1968) contend that the grammatical arguments or relations of a sentence, such as subject and object are commonly defined in terms of thematic relations (Jackendoff 1972) or theta-roles, abbreviated as θ -roles (Chomsky 1981). The assumption is that there should be a one to one correspondence between the grammatical arguments of a verb and its θ -roles. Generally, this approach has been employed as a

¹ Kiwoso is among dialects of Chagga language spoken in the north-eastern part of Tanzania. Maho (2009) classified Kiwoso as E621D (cf. chapter 2 for more details about the language).

means of representing argument structure, with verb meaning taken to be its main determinant. Put differently, the lexical semantics of a verb directly determines its syntactic behaviour. Linguists agree about the significance of the θ -role in determining the grammatical arguments of a verb. However, this approach is inadequate since argument realization (i.e. possible syntactic expressions of the verb's participants) cannot be determined by the verb in isolation. Rather, the verb and its complements compositionally determine argument realization (cf. Keyser & Hale 1993; Borer 1994, 2005; Levin & Rappaport Hovav 2005; van Gelderen 2013).

Acknowledging the limitations of θ -roles, linguists generally agree that argument structure is determined by event semantics to a significant extent, hence argument realization should be determined by the verb meaning in relation to the event it denotes (cf. Lin 2004; Borer 2005). Events are classified into aspectual classes based on aspectual properties of verbs. An influential study in this field is Vendler's (1957) four-way classification through which he classifies events into Activity, Accomplishment, Achievement, and States. Smith (1997) refers to these event types as situation aspect, distinct from viewpoint aspect (see chapter three subsection 3.7.5). The classification of verbs in terms of their event semantics has proved significant in addressing the relationship between verbs and other morphosyntactic categories such as the occurrence of tenses and adverbials, particularly in relation to understanding the logical entailment of sentence elements, and restrictions of their co-occurrence.

Studies in generative syntax have been crucially concerned with the problem that a single syntactic argument position can realize various expressions which appears to express distinct thematic roles (Tenny & Pustejovsky 2000; Alexiadou & Schäfer 2006; Alexiadou & Anagnostopoulou 2009). Alexiadou and Anagnostopoulou, in particular, demonstrate that causative verbs license all types of external arguments (i.e., agents, instruments, causers and causing events) which are realized as either subject Determiner Phrases (DPs) or Prepositional Phrases (PPs), depending on the alternation types. Study has as yet been conducted in Kiwoso in this area. This study, therefore, aims to examine this property in relation to (anti-)causative, passive and middle alternation constructions of change of state and change of location/position verbs in Kiwoso.

1.2 Purpose and rationale for the study

The interaction and interdependency of argument realization, causation, and event semantics has been widely studied from a variety of typological and theoretical perspectives over several decades, particularly in relation to Germanic and Romance languages. Research in this area has led to a deeper

understanding of the nature of morphosyntax and lexical semantic interfaces (Hall 1965; McCawley 1968; Dowty 1979; Jackendoff 1990; Levin & Rappaport Hovav 1995; Kearns 2000; Pinon 2001; Alexiadou et al. 2006, 2015; Koontz-Garboden 2009; Alexiadou 2010; Alexiadou & Doron 2012; Wechsler 2015; Williams 2015). However, scant research has been done in African languages from these perspectives, although it is evident from descriptive grammars and some theoretical studies that these languages have a wealth of insights to offer from both empirical and theoretical viewpoints.

In studies on Bantu languages, considerable attention was given to the causative verbal suffix *-is-*. (Shibatani 1976; Baker 1985, 1988; Alsina 1992; Bresnan & Moshi 1993; Hyman 2003a; Mchombo 2004; Lusekelo 2008; Fernando 2010, and references therein). The process of morphological causativization entails that a verb adds a causer argument, having a coercive, assistive or permissive interpretation depending on the discourse contexts, as Kiwoso examples in (1) illustrate.

- (1) a. *waka waledemisa wana* *coersive*
wa-ka wa- le- dem- is- a wa-na
 2-woman 2AGRs-PST- cultivate-CAUS-FV 2-child
 ‘Women made the children cultivate (women caused the children to cultivate)’
- b. *Lelo nyaletolisa muna ngaraja* *assistive*
Lelo ni- a- le- tol- is- a muna ngaraja
 Lelo INIT- AGRs-PST- cross- CAUS-FV child 9bridge
 ‘Lelo assisted/helped the child to cross the bridge’
- c. *Lelo nyalelolisa muna idirishen* *permissive*
Lelo ni- a- le- lol- is- a muna idirishe-n
 Lelo INIT- AGRs-PST- see- CAUS- FV child 5window-LOC
 ‘Lelo allowed the child to look through the window’

However, the causative meaning of the suffix *-is-* in Bantu languages exemplified in (1) has no relationship with the issues of causation addressed in this study. The causative syntax investigated in the present study relates to the causative and anticausative uses of a verb which exhibits argument alternation properties, as demonstrated in examples (2) and (3).

- (2) a. *wana walebaara kikombe* *causative*
wa-na wa- le- baar- a ki-kombe
 2-child 2ARGs-PST- break- FV 7-cup
 ‘The children broke the cup’
- b. *kikombe kilebarika* *anticausative*
ki-kombe ki- le- bar- ik a
 7-chair 7ARGs-PST- break- STAT- FV
 ‘The cup broke’ (the cup became/got broken)
- (3) a. *waka walesomuka mmba* *causative*
wa-ka wa- le- somuk- a mmba
 2-woman 2AGRs-PST- exit- FV 9house
 ‘Women exited the house’
- b. *mmba kulesomuka waka* *anticausative*
mmba ku- le- somuk- a wa-ka
 9house 17- PST- exit -FV 2-woman
 ‘From the house exited women’
- c. *mmba ileksomuka waka* *anticausative*
mmba i- le- somuk- a wa-ka
 9house 9AGRs-PST- exit -FV 2-woman
 ‘The house (is the place where) women exited’

The available studies on argument alternations in Bantu languages generally treat alternation types in isolation with the majority focusing on passive verb constructions (Mkude 2005; Khumalo 2009; Kula & Marten 2010) and a few others on middle formation (Mchombo 1993; Seidl & Dimitriadis 2003). These studies demonstrate that both passive verb sentences and middle constructions involve the promotion of the (logical) object argument to the subject position, and the (logical) subject is either unexpressed or is realized as an oblique (i.e. in a prepositional phrase) in passive constructions.

Passive and stative verb constructions in Kiwoso have been treated in passing (see Mushi 2005; Mallya 2011). To my knowledge, there is no particular study on anticausative and middle alternation constructions that have been conducted for Kiwoso. This study presents a unified analysis of anticausative, passive and middle alternation constructions invoking the functional categories of

Voice, vCause and Root, as postulated by Alexiadou et al. (2006) and Alexiadou (2010), in order to characterize the morphosyntactic and lexical semantic properties of change of state and change of location/position verb constructions in Kiwoso.

1.3 Significance of the study

Kiwoso is one of the Bantu languages that still need a systematic analysis of its morphosyntax and lexical semantic. Therefore, the present study on causation and argument realization in Kiwoso aims to bridge this knowledge gap in African languages generally, and in Bantu languages in particular. Given that most of the studies in Bantu languages approached argument alternations as isolated phenomena, this study presents a comprehensive analysis of the verbal argument alternations as evidenced in anticausative, passive, and stative verb constructions in Kiwoso. In essence, the present study aims to make a contribution to the on-going debate on causative and anticausative alternations based on the examples from Kiwoso.

Furthermore, the current study aims to stimulate further research, particularly on languages related to Kiwoso for comparative purposes in the area of (anti)-causative alternation realization. The exploration of causation and argument realizations in Kiwoso makes this study unique because to my knowledge, have not been covered in the previous studies carried out in this language, or even in other closely related languages. Therefore, this study will add to the available linguistic literature on causation, thus enhance understanding of morphosyntactic and lexical-semantic properties of change of state and change of location/position verbs in Kiwoso.

Although the present study aims to contribute to the documentation of the under-studied language, major aspect of contribution lies in its theoretical significance. The present study employs the syntactic decomposition approach in the analysis of change of state and change of location/position verbs in argument alternations in Kiwoso. This approach is utilized in conjunction with other approaches to morphosyntax such as Distributed Morphology (DM), Minimalist Program (MP), and Cartography, in order to adequately account for the properties of alternation sentences in Kiwoso. Previous studies on argument realization and causation (cf. Alexiadou et al. 2006; Schäfer 2008, 2009; Fernando 2013, 2015, among others) mainly presented analysis invoking a single framework, i.e. syntactic decomposition perspectives. This kind of analysis of argument alternations, particularly with regard to Bantu languages was unable to address important properties of these constructions. Morphosyntactic properties of these languages such as agreement and properties of the functional head projections as realized in the argument alternation constructions of change of state and change

of location/position verbs in Kiwoso cannot be accounted fully on the basis of syntactic decomposition approach only. Thus, the present study explores the suitability of these generative approaches in characterizing change of state and change of location/position verbs in argument realization, causation, and event semantics in Kiwoso. The combination of these approaches seem appropriate to a study encompassing argument alternations, event structure, information structure, lexical semantics, and syntax interfaces, as demonstrated in the present study.

1.4 The research problem

No study has yet been conducted on argument realization and alternation in Kiwoso. Studies conducted in Bantu languages on verbal argument alternations have generally treated alternation types separately. The present study explores the issues concerning morphosyntactic and lexical semantic features of argument alternations using different combination of Voice, vCaus and Root in Kiwoso. The central issue addressed in the study concerns verbal argument alternations in relation to anticausative, passive, and middle constructions, and the syntactic behaviour of these alternation constructions in the realization of external arguments. The properties of change of state and change of location/position verbs in licensing these alternations constitute an integral part of the study.

1.5 Research questions

This research addresses the following specific questions on argument realization, causation, and event semantics in Kiwoso:

- (i) What are the limitations of change of state and change of location/position verbs in the realization of (anti-)causative alternation in Kiwoso?
- (ii) Are anticausative alternations in Kiwoso realized with overt or covert morphology?
- (iii) Which lexical semantic and aspectual characteristics determine the classification of verb roots into semantic classes in Kiwoso?
- (iv) What is the distribution of PPs in the realization of arguments alternation constructions such as anticausatives, passive and middle in Kiwoso?
- (v) What lexical semantic features determine different external arguments of the verb such as agents, instruments, causers, and causing events in Kiwoso?
- (vi) Which factors differentiate anticausatives from other alternation constructions such as passives?

- (vii) What are the similarities among anticausative, passive and middle constructions in Kiwoso with respect to argument realization?

1.6 Research goals

The study on argument realization, causation and event semantics in Kiwoso is done within the theoretical framework of syntactic decomposition and aspectual verb class approaches, complemented by Minimalist version of generative syntax and Cartographic approach. The study has the following general goals:

- (i) To identify lexical semantic characteristics of change of state and change of location/position verbs that permit the (anti-)causative alternation in Kiwoso;
- (ii) To determine whether (anti-)causative variants are explicitly or implicitly expressed in Kiwoso;
- (iii) To identify lexical semantic and aspectual properties of verbs that determine the classification of verb roots into semantic classes in Kiwoso;
- (iv) To identify specific features of (anti-)causative constructions that license the distribution of PP-like argument types introduced by different argument alternations such as anticausative and passive in Kiwoso;
- (v) To determine the lexical semantic features of change of state and change of location/position verbs in Kiwoso that influence the alternative realization of different external arguments of the verb in Kiwoso;
- (vi) To examine the relationship between anticausatives and other argument alternation types such as passive and middle verb constructions in Kiwoso.

1.7 Methodology of the study

Given that research methodology is the systematic procedures that the researcher undergoes in order to carry out the study, its aim is to give a work plan of research which enables researchers to identify suitable methods² regarding research methodology for a chosen problem. Two major distinctions are made in the literature concerning methodology designs, namely qualitative and quantitative designs. The two categories are originated from different disciplines. Quantitative design is often used in the

² Research methods are the techniques that are used to conduct research including the instruments used to collect and analyze data for the study (Crotty 1998).

field of psychology in which statistics is the focus in making generalizations from samples to populations (Perry 2005). Qualitative research design which has its origin in the anthropology and sociology research fields tends to avoid quantification, and instead relies on verbal descriptions. However, both designs are currently widely used in other social science fields including linguistics, folklore, political sciences, just to mention a few of these disciplines.

The present study is theoretical linguistic in nature. It adopts elements of a qualitative research methodology since it is concerned with characterizing native speakers' internalized linguistic knowledge, in particular the knowledge underlying their judgment on the acceptability of sentences expressing argument realization and alternations in Kiwoso. This approach enables the researcher to gather the information for the study based on other native speakers' intuition about the (un)acceptability of the constructions provided.

1.7.1 Data collection procedures

In conducting the investigation of this study, firstly, a representative sample of change of state and change of location/position verbs, as outlined by Levin (1993), were identified with regard to their syntactic and semantic characteristics. Syntactically, the verbs in question exhibit different properties regarding the selection of external arguments (e.g., agents, instruments, causers, and causing event), and internal arguments (e.g., patient, theme, goal, source and location). Given the theoretical nature of the study, the focus is not on collecting a big data corpus of verbs for statistical analysis. Therefore, the number of verbs examined for the study is considered sufficiently wide in scope in order to establish the regularity of the syntactic and event structure properties investigated for the respective verb classes. Example sentences on argument alternation constructions in Kiwoso were collected using different strategies such as introspection, consultation of native speakers, and a review of relevant literature. These methods supplement and complement each other, thus enhance the quality and validity of the collected information. This is supported by Cohen et al. (2000) who proposes that no single research technique is self-sufficient in the collection of information. Therefore, the use of more than one specific method enables the researcher to strengthen the data, and hence ensuring reliability. Merriam (2002) asserts that it is worthwhile to employ more than one method of data collection because multiple methods add to the validity of the research findings. The methods employed in collecting the data relevant for the present study are as clarified in the following subsections.

1.7.1.1 Introspection

Nunan (1992:115) defines introspection as ‘the process of observing and reflecting on one’s thoughts, feelings, motives, reasoning processes, and mental states with the view to determining the ways in which these processes and states determine our behaviour’. Other scholars define introspection as a process of data collection in which data are obtained from one’s own speech as opposed to being elicited from other speakers or obtained from the texts (Dornyei 2007). As a native speaker of Kiwoso, a researcher was able to use her grammatical competence and proficiency of the language to identify and compile core example sentences for the present study. The method of introspection is widely used in generative studies. Merriam (2002) in particular pointed out that in qualitative research which focuses on assigning meaning or understanding, a researcher is the primary instrument for data collection and analysis. Therefore, being a native speaker of Kiwoso, the researcher was eligible to construct and assign meaning to Kiwoso sentences relevant for the study, particularly the constructions on anticausative, passive, and middle alternations.

1.7.1.2 Consultation with Kiwoso speakers

Language practitioners have noted that there is no speaker who uses all the different forms and constructions available in his or her language, and for that reason, the dormant part needs to be activated by other native speakers (Besha 1989). This calls for the researcher to consult other native speakers of Kiwoso in order to obtain their judgements on the acceptability of the sentences (i.e. the extent to which the sentences sound ‘good’ or ‘bad’) compiled for the purpose of the present study. Consultation with other speakers of the language was important as it enabled the researcher to obtain not only the acceptability judgments of the constructions, but also additional interpretations regarding the constructions which might have been (partly) overlooked by the researcher. Given this significance, the researcher considered it significant to consult with other speakers of Kiwoso, irrespective of the extensive body of example sentences on argument alternations at her disposal. Labov (1972) asserts that it is inadequate and undesirable to rely entirely on introspection. Therefore, it was important that other competent native speakers of Kiwoso be involved in forming decisions about the acceptability judgements of the example sentences compiled by the researcher.

1.7.1.3 Review of research literature

Generally, written texts and documents form one of the major sources of data for language analysis, particularly in adopting a qualitative research design. This study partly relied on the available studies in Kiwoso. Given that Kiwoso is one of the largely undocumented languages, the scant available studies were considered and exhaustively reviewed to obtain some of the data employed in this study.

The sources reviewed include the study on locative expressions by Mallya (2011), the dictionary by Kagaya and Olomi (2009), and the study on verbal extensions by Mushi (2005). In these studies, change of state and change of location/position verbs were identified, and sentences with passive and stative verb suffixes were examined. The examples obtained provide insights of both an empirical and theoretical nature on the properties of change of state and change of location/position verbs in argument alternations in Kiwoso, which constitutes the core concern of the present study. Although the notion of argument alternation is not explicitly mentioned in these studies, the example sentences considered provided important descriptive information on the properties of change of state and change of location/position verbs in anticausative, passive and middle alternation constructions in Kiwoso.

1.7.2 Ethical procedures

It has been mentioned in section 1.7.1.2 that this study involved consultation with Kiwoso consultants on the acceptability judgements of the sentences. Although this consultation was of a low risk as regards ethical concerns, the appropriate ethical considerations were meticulously taken into account. Before involving the consultants in the actual process of examining the constructions, the researcher had to obtain their consent which was informed and voluntary. The researcher explained to the consultants that the main goal of the study concerned academic purposes. The process of obtaining the consent of the consultants and making them aware of the main use of the data established a good working relationship and maintained trust between the researcher and the consultants, which resulted in them providing their intuitions willingly and confidently.

1.8 Theoretical framework

This section presents an overview of the theoretical framework adopted for this study. It has been pointed out that the main goal of the study is to characterize change of state and change of location/position verbs in terms of argument realization and (anti-)causative alternation in Kiwoso. To account for the anticausative alternations of verbs of change of state and change of location/position, this study adopts a syntactic decomposition approach, particularly the proposals by Alexiadou et al. (2006) and Alexiadou (2010). This approach is supplemented by the Minimalist version of generative syntax (cf. Chomsky 1995, 2000, 2001) and the Cartographic approach³ to

³ Although Cartography is widely referred to as ‘Cartographic approach’, it has been stated explicitly that cartography is not an approach or a hypothesis; rather, a research topic guided by certain methodology and some assumptions (cf. Cinque & Rizzi 2008).

generative syntax as articulated in Rizzi (1997, 2012, 2013), Cinque (1999, 2002), and Shlonsky (2010). The fact that syntactic decomposition approach is rooted within the perspectives of Distributed Morphology (DM), some basic concepts of DM are discussed in this section as well (cf. section 1.8.2). It is a widely held view that locative-subject alternation constructions are used in a specific discourse-related information. This view motivates the discussion of a general overview on information structure based on the previous research, as summarized in section 1.9.

1.8.1 The syntactic decomposition approach

A widely held view in the linguistic literature is that verbs undergoing (anti-)causative alternations contains a single lexical entry and that the causative (transitive) and the anticausative (intransitive) are derivationally related. Given this view, two competing approaches, namely the causativization and detransitivization have been proposed in account of the derivational relationship between the two variants. The proponents of the causativization view (cf. McCawley 1968; Lakoff 1970; Dowty 1979; Williams 1981; Brousseau & Ritter 1991; Pesetsky 1995, among others) argue that alternating verbs are basically monadic, thus the causative variant is derived from the anticausative through causativization process (cf. the discussion in chapter 3, section 3.3.2.1). The detransitivization approach, on the other hand, assumes that alternating verbs are inherently dyadic predicates. The anticausative is derived from the causative via detransitivization process (Grimshaw 1982; Chierchia 1989/2004; Levin & Rappaport Hovav 1994, 1995; Reinhart 2000, 2002). (See also chapter 3, section 3.3.2.2 for details).

However, these approaches are inadequate in accounting for the properties of verbs that participate in (anti-)causative alternation within and across languages. It has been evidenced, for example, that neither the causativization nor the detransitivization view can adequately explain the cross linguistic variation observed in the morphological marking of the alternations (cf. Haspelmath 1993). Furthermore, both views face similar challenge in that the class of alternating verbs are not stable across languages. For example, verbs such as *destroy* and *kill* do not alternate in English or German, but they form a subset of alternating verbs in Greek (Alexiadou et al. 2006; Schäfer 2009).

Alexiadou et al. (2006) and Schäfer (2009) further pointed out that both causativization and detransitivization views encounter a logical problem in that, on the one hand, there are verbs that exhibit causative form only, for example, the verb *cut* in English. Such verbs would not have a source from which they could be derived, arguing against causativization. On the other hand, there are verbs that are inherently anticausative, for instance the internally caused change of state verbs (e.g.,

blossom, wilt ...). These verbs lack causative alternates. According to the detransitivization view, these verbs would have to derive something from a non-existing base, which is logically impossible.

Given the shortcomings of derivational analyzes of the causative alternations, the present study adopts the syntactic decomposition approach to account for argument alternations of change of state verbs and change of location/position verbs in Kiwoso by invoking the distinct functional heads of Voice, vCaus and Root, as proposed by Alexiadou et al. (2006, 2015) and Alexiadou (2010).

Building on proposals by Kratzer (2005), Alexiadou et al. (2006) argue that causative alternations are concerned with Voice alternates between transitive and intransitive variants. They postulate that causative and anticausative alternations involve the same event decomposition and that the only difference between them is the presence versus absence of the Voice component which introduces an external argument. These scholars argue that both the causative and anticausative are built up from a combination of a Root and Theme which expresses a resultant state, and an eventive verbal CAUS which takes the resultant state as its complement. The functional category CAUS introduces a causal relation between a causing event and the resultant state denoted by the [$\sqrt{\text{Root}} + \text{theme}$] complex. They pointed out that causatives in both active and passive forms in addition have a Voice projection on top of CAUS, and that it is responsible for the introduction of the external argument (DP_{EA}), as illustrated in figure 1.

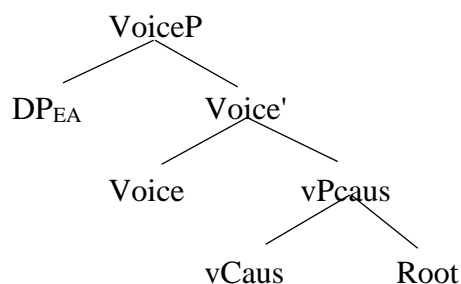


Figure 1: Structure of a sentence with a Voice feature

Given this view, no derivational relationship between the causative and the anticausative verb constructions can be posited since none of the two is directly derived from the other. Thus the causative and the anticausative alternates are viewed to have a common Root. Alexiadou et al. (2006, 2015) propose the decomposition of causative and anticausative verbs as represented in (4a) and (5a), respectively. (4b) and (5b) are examples of causative and anticausative sentences, respectively.

- (4) a. The abstract decomposition of causatives

[DP_{ext-arg} VOICE[CAUS[√Root+DP_{theme}]]]

- b. Jane opened the door

[Jane VOICE[CAUS[the door √open]]]

- (5) a. The abstract decomposition of anticausatives

[CAUS[√Root+DP_{theme}]]]

- b. The door opened

[CAUS[the door √open]]

Alexiadou et al. (2006, 2015) and Alexiadou (2010) assert that the Voice functional category does not introduce an event, but simply expresses a relation between the element in its specifier (DP_{EA}) and the event in its complement position (CAUS) (see figure 1). They postulate that Voice bears features related to thematic roles of an external argument and also manner related features. They maintain that various Voice features are involved in causative, passive and anticausative alternation constructions, and that external arguments of active and passive verb constructions, such as an agent and causer require either agentive or non-agentive features in which the agentive Voice (Voice [+AG]) licenses agents (and instrumental PPs), while the non-agentive Voice (Voice [-AG]), introduces the causers.

These scholars argue that with regard to anticausatives, the approach offers two options, namely that languages may either lack Voice or may be realized as Voice [-AG] with an implicit causer argument, but languages vary in the second option. Some languages exhibit the Voice [-AG] head and others Voice [+AG] feature in passives. For languages that license Voice [-AG] in passives, the anticausative must appear without Voice, while those with an agentive feature in passive, the anticausatives can freely acquire Voice [-AG] head interpretation. This variation prompted Alexiadou (2010) to propose two structures for anticausative constructions, as illustrated in (6).

- (6) a. [vCAUS [ROOT]]

- b. [Voice [vCAUS [ROOT]]]

Alexiadou (2010) suggests that structures such as (6a) represent morphologically unmarked anticausative constructions, whereas (6b) represents morphologically marked anticausative constructions. The structure for marked anticausatives is similarly but not identical to passive

structures. It has been suggested that marked morphology in anticausatives is the morphological instantiation of the absence of an external argument (cf. Embick 1998). Therefore, languages with both marked and unmarked anticausatives such as Greek (see also chapter 4) have both structures, whereas languages which exhibit unmarked anticausatives only, such as English, display the structure in (6a).

Alexiadou et al. (2006, 2015) propose that Roots fall into different classes depending on their encyclopaedic semantics. Following Levin and Rappaport Hovav's (1995) terminology, these scholars characterized the Roots that restrict their subject to agent arguments as '*agentive*', and the Roots that do not restrict their subject to agents as '*externally caused*'. In addition, Roots that are not specified for an external or internal causation are categorized as '*cause unspecified*' and Roots that form anticausative verbs only but not causatives are regarded as '*internally caused*'. This four-way classification of Roots is illustrated in (7) with reference to English examples.

- (7)
- (a) $\sqrt{\text{agentive}}$ (*murder, assassinate*)
 - (b) $\sqrt{\text{internally caused}}$ (*blossom, wilt*)
 - (c) $\sqrt{\text{externally caused}}$ (*destroy, kill*)
 - (d) $\sqrt{\text{cause unspecified}}$ (*break, open*)

These scholars argue that causative alternation is, therefore, determined by the encyclopaedic information associated with Roots. They advance the view that every Root which can be used to form a change of state verb appears in both causative and anticausative structures, as demonstrated in (4) and (5), respectively.

Within syntactic decomposition approach (see Alexiadou et al. 2006, 2015; Alexiadou 2010) it is posited that all Roots combine with a CAUS component, but the combination of Roots with a certain Voice head depends on whether the event is internally or externally caused. However, internally caused verbs have received different analysis from different scholars. Whereas some scholars (Mckoon & Macfarland 2000; Wright 2001, 2002; Alexiadou & Anagnostopoulou 2004; Alexiadou 2014; Alexiadou et al. 2015) analyze internally caused verbs as causatives, others claim that internally caused verbs cannot be used causatively (Levin & Rappaport Hovav 1995; Levin 2009). The present study explores both externally and internally caused change of state verbs in order to establish their properties in causative and anticausative alternation constructions in a Bantu language, Kiwoso.

Apart from the proposals made by Alexiadou et al. (2006, 2015) that argument alternations such as (anti-)causative and passive decompose into Voice and vCAUS heads, it has recently been argued that passive and middle contain two different syntactic Voice heads realized in terms of morphology, which in turn produce passive and middle clauses, respectively (Alexiadou & Doron 2012). These scholars assert that middle verb clauses are understood differently across languages. The middle verb clauses may have anticausative, reflexive, dispositional middle, and medio-passive interpretations. Alexiadou and Doron argue that the multiple interpretations of the middle voice are not derived by four different lexical rules. Rather, it is a manifestation of different encyclopaedic semantic nature of the Root. This point lends more support to syntactic decomposition approach to accounting for argument realization and alternations.

It has been evidenced that the causativization and the detransitivization approaches can only account for part of the morphological structures found across-languages, hence the other part of the paradigm is left unexplained. For example, approaches assuming causativization are justified by languages that mark the causative variant, while approaches assuming detransitivization base their evidences on languages that mark the anticausative variant. In addition, syntactic decomposition approaches assume that both the causative and anticausative are derived from a common base, thus neither the causative nor the anticausative variant stand in derivational relationship to each other. Furthermore, these approaches hold that causative and anticausative share event decomposition. The two variants differ in the presence versus absence of a Voice head which introduces an external argument.

According to these views, the syntactic decomposition approach is considered a preferred approach relevant for analysing causative alternations of change of state and change of location/position verbs in Kiwoso. Although much is known regarding the properties of anticausatives in the majority of languages, idiosyncratic aspects obtain for specific languages. Therefore, it is important that these aspects be explored for Bantu language like Kiwoso. Furthermore, the causative alternation is a linguistic phenomenon which has received extensive attention in linguistic research, particularly in relation to Germanic and Romance languages. However, the available literature suggests that little exists in relation to African languages. Therefore, the present study aims to make a contribution to the body of research on causative alternation in a Bantu language, Kiwoso.

1.8.2 Distributed Morphology (DM)

The syntactic decomposition approach assumed in this study is couched within the Distributed Morphology (DM) framework postulated by Halle and Marantz (1993, 1994). The basic assumption of DM is that verbs are syntactically derived from Roots in combination with the verbalizing head

(cf. Marantz 1997). Roots are defined as category neutral in the sense that they do not bear any category feature (Embick 2015; Panagiotidis 2015). Embick in particular asserts that Roots appear in syntactic derivations in which they have been merged with categorizing functional heads (cf. section 3.4 of chapter 3 on Root categorization).

As a framework compatible with the Minimalist Program, DM assumes that syntax is the only generative component of the grammar, and that lexical items such as nouns, verbs, and adjectives are the products of syntactic operation and not categories specified in the lexicon (Siddiqi 2009; Panagiotidis 2015). According to Distributed Morphology (DM), the syntax comprises a set of rules that generate syntactic structures which are then subject to further operations in the derivation to the interface levels, Phonetic Form (PF) and Logical Form (LF) (see also section 1.8.3 on Minimalist Program). DM is a non-lexicalist approach of word formation, and it is characterized by three main features that set it apart from the lexicalist theories of word formation: Late Insertion, Underspecification, and Syntactic Hierarchical Structure All the Way Down (Halle & Marantz 1994; Harley & Noyer 1999).

The Late Insertion hypothesis holds that phonological expression of syntactic terminal nodes is provided at Phonetic Form (PF) after the syntax builds all the relevant structures. Thus, after syntax, phonological expressions referred to as Vocabulary Items, are inserted in a process called Spell-Out. It has been argued, however, that vocabulary insertion adds only phonological information to the terminal nodes, and not syntactic or semantic content (Halle & Marantz 1994). Siddiqi (2009) points out that in DM, only syntactic terminals involving interpretable features (i.e. features with semantic content) are inserted at Spell-Out.

The DM approach assumes Underspecification of Vocabulary Items (UVI) inserted into a syntactic terminal nodes. In DM, Vocabulary Items are inherently underspecified in accordance to the features of the nodes in which they are inserted. In this regard, it is common to find several Vocabulary Items available for insertion into a single terminal node (Halle & Marantz 1994). These scholars argue that a Vocabulary Item which is the most highly specified in relation to a subset of the features of the terminal node competes best and is inserted. In other words, in DM, Vocabulary Items are not specified for the syntactic positions where they can be inserted; rather, they are inserted where no more specific form is available (see also chapter 3, section 3.4).

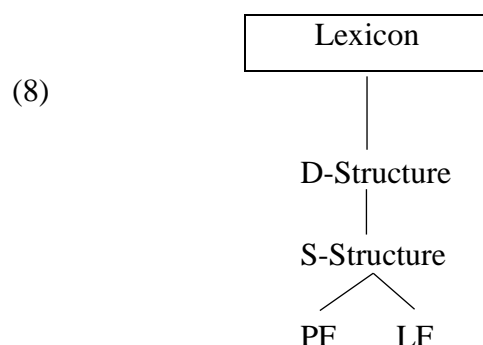
In DM, it is posited that the Syntactic Hierarchical Structure notion of All the Way Down entails that the terminal nodes into which Vocabulary Items are inserted are organized into hierarchical structures determined by the principles and the operations of the syntax (cf. Halle & Marantz 1994). In other

words, the Syntactic Hierarchical Structure All the Way Down holds that syntactic and morphological elements enter into the same types of constituent structures, thus the elements can be represented through binary branching trees (Harley & Noyer 1999).

The DM assumptions are significant in the analysis of argument alternation constructions examined in the present study because the main framework (i.e. the syntactic decomposition approach) adopted in this study assumes that argument alternation constructions such as (anti-)causative, passive, and middle are syntactically derived, and thus the built structures are compositionally interpreted, the assumptions corresponding to DM views. The present study assumes further that functional heads such as Voice and vCaus are underspecified and that their occurrence are determined by a specific syntactic contexts. Therefore, in the present study, Roots are also regarded as underspecified elements which give rise to different interpretations depending on the syntactic contexts in which they are inserted, and their co-occurrence with different functional heads.

1.8.3 The Minimalist version of generative syntax

Minimalist Program (MP) of linguistic theory constitutes the most recent version in the generative syntax enterprise. It is a new version following Chomsky's (1981) Government and Binding (GB) theory and Principles and Parameters theory of generative grammar. The GB approach assumes that the grammar of a language consists four levels of representation, namely Deep Structure (DS), Surface Structure (SS), Phonetic (phonological) Form (PF), and Logical Form (LF) (Chomsky 1981). The four levels of grammatical representation are regarded as formal objects with specific functional and substantive characteristics (cf. Hornstein et al. 2005). Within GB theory, the organization of grammar is represented by the so-called T-Model (Haegeman 1997; Hornstein et al. 2005), in that SS is the only level that directly relates to the other levels, as (8) summarizes.

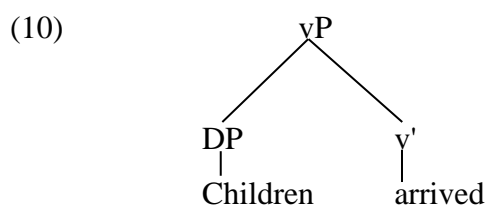


According to the GB theory model in (8), lexical items project into DS level. GB theory furthermore posits that DS deals particularly with the mappings of grammatical functions with their respective thematic roles. Thus, DS respects the theta criterion hypothesis which requires that each argument be assigned one and only one theta role, and each theta role to be associated with one and only one argument. In the course of derivation, the operation Move applies which maps the DS level into SS. SS is the point in which the derivation splits into two interface levels of interpretation, namely Phonetic (Phonological) Interpretation (i.e. the PF level) and Semantic Interpretation (i.e. the LF level). According to GB theory, PF and LF provide grammatical information required to assign a phonetic and semantic interpretation to a sentence.

Unlike Government and Binding theory (GB), the Minimalist Program (MP), reduces linguistic levels of representations to only those required for the interfaces between the computational system of human language, on the one hand, and the component of the brain concerned with the articulatory-perceptual system (A-P) and the conceptual-intentional system (C-I), on the other hand (Chomsky 1995). MP thus assumes that the A-P and C-I interface with the PF and LF, respectively. In this regard, Deep Structure and Surface Structure posited in the GB framework have no place in Minimalism. In MP, DS and SS levels are regarded as internal to the syntactic computational system.

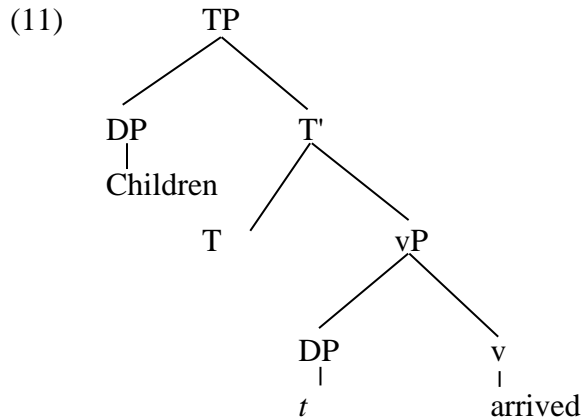
MP assumes that computational system of human language involves operations for generating structures. The first operation is Merge (also known as an external merge). This operation takes fully-fledged lexical items selected from the so-called Numeration (Chomsky 1995:225-227) and combines them or their projections in a pair-wise fashion in the derivation of sentences. For example, the lexical items in (9) are selected and combined to derive the sentence ‘Children arrived’. In (10), the verb *arrived* merges with noun *children* giving rise to the binary branching structure illustrated in (10).

(9) *Children, arrived* [numeration]

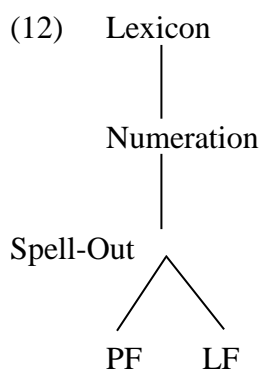


This operation is recursive in that the output of Merge may be merged with other elements resulting into a new unit. For example, in (10), the vP can be merged with the tense phrase (TP) by selecting

the functional head T from the numeration. Such selection and merging will yield the structure in (11).



According to the perspectives of MP, the merged elements may contain unvalued formal features that must be valued by entering into the syntactic relation Agree with some other element in their syntactic (c-command) domain with corresponding valued formal features (Chomsky 2000, 2001). The unvalued formal features function as probes that search within a certain domain for a goal with corresponding valued features. Minimalist Program (MP) assumes further that this probe can be assigned Extended Projection Principle feature (EPP-feature) which requires that the goal be placed in its minimal domain through an operation Move (also known as an internal merge) (Chomsky 1995), as the DP in the structure in (11) illustrates. When the numeration is exhausted, the subsequent applications of Merge and Move must have resulted in an output representation that satisfies Full Interpretation principle. Full Interpretation is the principle of representation economy, which requires that all the features of the pair be legible at the relevant interfaces (Hornstein et al. 2005). If the operations Merge and Move resulted in a legitimate structure, the derivation is said to converge both at Phonetic Form (PF) and at Logical Form (LF), and it is assigned phonological and semantic representations, respectively. If the formed pair of either PF object or LF object does not satisfy the Full Interpretation rule, the derivation is said to crash at the relevant interface level. The organization of the grammar in the current Minimalist approach is as summarized in (12).



In the current study, Minimalist approach is adopted for the reason that its architecture in terms of Merge, Move and feature checking (Agree) are relevant in accounting for the derivation of the agent/theme subject alternate and the goal/location subject alternate with and without locative morphology, respectively realized by locative-subject alternation sentences of change of location/position verbs in Kiwoso (cf. chapter 6). In other words, the Minimalist views offer relevant explanation for the agreement properties of the preverbal goal/location subject argument and the postverbal agent/theme argument of the locative-subject alternation constructions, as discussed in chapter 6.

1.8.4 The Cartographic approach to generative syntax

Cartography has been defined as a research project constituting a further development from the syntactic theory of Principles and Parameters (cf. Cinque & Rizzi 2008). As a research approach, Cartography is guided by the view that syntactic structures are uniform, locally simple and both necessary and sufficient to structurally represent the grammatical or functional information relevant for semantic/pragmatic interpretation (Shlonsky 2010:417). Generally, Cartography as a research program cuts-across syntactic theory, semantics, as well as discourse and information structure.

Within the Cartography, Determiner Phrases (DPs) are viewed to including representation of discourse-related information, projected with Topic and Focus phrases. The present study employs the Cartographic development in order to account for the functional heads realized by argument alternation constructions of change of state and change of location/position verbs in Kiwoso. The properties of the preverbal goal/location subject argument and the postverbal agent/theme argument of change of location/position verbs in Kiwoso are evidently associated with the information structural categories, Topic and Focus. Therefore, the Cartographic proposals are assumed in the representation of functional projections such as Topic and Focus, the two discourse-related information functional heads realized by the change of location/position verbs examined in the present study.

In the cartographic approach, the Complementizer Phrase (CP) is regarded as a rich structural zone (Rizzi 1997) which among other things, hosts positions dedicated to discourse-related information such as Topic and Focus (see also Rizzi 2013). In the present study, the information structure of the preverbal goal/locative DP and the postverbal agent/theme DP of change of location/position verbs examined in relation to locative-subject alternation sentences are represented in the CP (cf. chapter 6). In locative-subject alternation constructions in Kiwoso, the preverbal goal/location argument and

the postverbal agent/theme argument move from their base-generated positions (i.e. vP-internal) to other positions to check their relevant features. The present study adopts Cartographic approach since it is adequate to account for the scope-discourse information, Topic and Focus. Generally, this approach justifies the existence of functional head projections such as AspP, TopP, and FocP, and guides syntactic representation of these functional heads in Kiwoso, as demonstrated in chapters 5 and 6. The following subsection provides an overview of the core properties of syntactic research on information structure.

1.9 Key notions on syntax and information structure

This section offers a brief overview on Information Structure (IS). Although the present study does not focus on IS, some insights about these notions discussed in this section are essential as it relates directly to the categories, Topic and Focus. Topic and Focus as examined in the present study are key elements in characterizing the two obligatory participants (the goal/location and the agent/theme arguments) of the locative-subject alternation constructions in Kiwoso (cf. chapter 6).

The notion Information Structure has been labelled differently as Information Structure or Theme (Halliday 1967), Information Packaging (Chafe 1976), and most recently, it has also been referred to as Discourse Pragmatics and Informatics (Vallduví 1990). Following Halliday (1967) and Lambrecht (1994), the present study adopts the term Information Structure because it captures the link between the structural elements and their implication in discourse contexts. Information structure has to do with how utterances are partitioned into information units in relation to the communicative needs of the interlocutors (cf. Chafe 1976; Lambrecht 1994; Erteschik-Shir 2007; Neeleman & Vermeulen 2012, among others). Thus IS determines how speakers structure their sentences in the given discourse contexts of interaction. Therefore, speakers' information packaging reflects their communicative goal and the hearers' communicative needs in the given discourse settings.

It has been argued that IS cuts-across all meaning bearing levels of the grammatical system, but more importantly, IS focuses on comparing sentence pairs, namely active versus passive, canonical versus topicalized, canonical versus clefted or dislocated. These pairs of sentence are semantically equivalent but structurally and pragmatically different (cf. Lambrecht 1994). Indeed, discourse-related word order variation is best explained in terms of interface between syntax and other component of grammar like information structure, as also suggested by Neeleman and Vermeulen (2012). Lambrecht (1994) points out that IS comprises three important categories, namely

Presupposition and Assertion, Identifiability and Activation, and Topic and Focus. In the present study, the attention is given to the categories, Topic and Focus, as discussed in the next paragraph.

The information-structural notion, Topic is defined as an old or given information about which the sentence or an utterance is conveyed (Lambrecht 1994; Erteschik-Shir 2007; Aboh et al. 2010). Erteschik-Shir in particular maintains that Topic conveys information in the sentence that is assumed to be shared by both the speaker and the hearer. Put differently, Topic generally denotes presupposed information in the sentence.

It has been pointed out that Topic and Focus are mutually exclusive information-structural notions (Erteschik-Shir 2007). Whereas Topic denotes an old and presupposed information in the sentence, Focus has been defined as new, non-recoverable, and non-presupposed information in an utterance (Jackendoff 1972; Lambrecht 1994; Erteschik-Shir 2007). In other words, contrary to Topic, Focus denotes information in the sentence which the speaker assumes to be unknown to the hearer in a given discourse contexts.

Scholars have proposed different categorizations of Focus notions. For example, Focus has been classified into two types, namely focus-as-new and focus-as-alternative by Rooth (1992), Hartmann and Winkler (2013), and Rochemont (2013). These scholars argue that focus-as-new expresses new information in the sentence, while focus-as-alternative has to do with selective expression to an element chosen from others sharing one syntactic category and one semantic field. Following Kiss (1998), Aboh et al. (2010) identified two types of Focus, namely information focus, which is referred to as presentational focus or wide focus, and contrastive focus, also known as identificational focus (Erteschik-Shir 2007). Lambrecht (1994) distinguishes three types of focus: predicate focus, argument focus, and sentence focus. Notice that the classification of the notion Focus has widely involved two key ideas, namely ‘newness’ and ‘contrastive’. However, the multiplicity of categories attributed to the information-related notion, Focus suggests that there is more than ‘newness’ as far as this concept is concerned.

In the present study, the concept Focus is regarded as denoting presentational and contrastive focus since presentational focus is related to the locative-subject alternations constructions examined in this study, particularly the properties of the postverbal agent/theme argument (cf. chapter 6). The subject argument in locative-subject alternation sentences of change of location/position verbs in Kiwoso exhibits contrastive Focus features (see chapter 6, section 6.7.7). Locative-subject alternation constructions referred to in the present study involve sentences with the agent/theme subject alternate and the goal/location subject alternate with and without locative morphology, respectively. In

Kiwoso, similarly to many Bantu languages (cf. discussion in chapter 4, section 4.10) the preverbal goal/locative subject argument triggers agreement on verbs just like a typical subject does. As discussed throughout chapter 6, Kiwoso exhibits two types of alternations: an alternate with the goal/location subject argument with locative morphology (10b), and the variant with the goal/location subject argument without locative morphology (10c). The two alternations differ in terms of agreement properties, but they are, however, semantically similar. In this study, locative-subject alternation sentences examined in relation to information structure notions, Topic and Focus are as demonstrated in (13).

- (13) a. *waka waleida duken*
waka wa le- id- a duke-n
 2-woman 2AGRs/-PST- enter- FV 5shop-LOC
 ‘Women entered (into) the shop’
- b. *duken kuleida waka*
duke-n ku- le- id- a wa-ka
 5shop-LOC 17- PST- enter- FV 2-woman
 ‘Into the shop entered women’
- c. *duka lyileida waka*
duka lyi- le- id- a wa-ka
 5shop 5AGRs-PST-enter- FV 2-woman
 ‘The shop (is the place where) women entered’

1.10 Organization of the study

Having provided the introduction of the study in chapter 1, the remainder of this thesis is organized as follows: Chapter 2 presents an outline of the descriptive grammar of Kiwoso. It offers a general overview of Kiwoso language in terms of its main grammatical features such as phonology and morphosyntactic characteristics. No attempt is made to present the complete grammar of the language. The descriptive overview presented is considered to be required to enable readers follow the presented information in the subsequent chapters, and the example sentences in the appendixes.

Chapter 3 offers an overview of related literature on argument realization, causation and event semantics. This chapter is organized into three major parts. The first part covers theoretical approaches to argument realization, whereas the second part reviews studies on (anti)causative

alternations and related verbal argument alternation constructions such as passive and middle. In this part, three competing approaches (i.e. the causativization, detransitivization and syntactic decomposition approaches) on (anti-)causative alternations are examined. The last part discussed various scholars' perspectives on aspectual verb class semantics. Reviewing previous literature is indispensable as the present study explores the properties of change of state and change of location/position verbs in the realization of external arguments in alternation constructions such as anticausative, passive and middle in Kiwoso.

Chapter 4 discusses grammatical relation changing constructions in Bantu languages. Different grammatical relation changing operations such as passive, stative, and locative inversion constructions in Bantu languages are reviewed. In relation to passive and stative verb constructions, the selected earlier and recent descriptive Bantu grammars are reviewed. The chapter also covers previous theoretical analysis of passive and stative verb constructions. Both descriptive and theoretical studies on passive, stative and locative inversion constructions in Bantu are considered for the reason that they relate to argument realization and alternations, the main themes forming the present study.

Chapter 5 discusses change of state verbs in relation to (anti-)causative properties in Kiwoso. The chapter begins by describing various constructions of change of state verbs as used in causative, anticausative, passive and middle alternation sentences in Kiwoso. These sentences are used in combination with different diagnostics for agentivity and telicity properties. The second part of the chapter analyzes the properties of the constructions, and presents the findings based on the adopted theoretical assumptions of the study. The relationship between anticausative, passive and middle constructions are also examined in this part.

Chapter 6 focuses on the analysis of locative-subject alternation constructions with motion verbs, verbs of existence, and verbs of change of state. Similarly to chapter 5, this chapter constitutes two major parts. Part one offers descriptive analysis of different constructions in combination with various modifiers. A range of modifiers are used in sentences in order to establish the status of the preverbal goal/location/source argument as subject, and the status of the postverbal agent/theme argument as a syntactic object. Additional diagnostics are also used to determine the status of locative subject prefix *ku-* as expletive in Kiwoso. Part two presents analysis and discusses the findings of the locative-subject alternation sentences based on the theoretical framework of the study. Furthermore, this chapter discusses the morphosyntax and the argument structure of change of location/position verbs in Kiwoso.

Chapter 7 summarizes major findings of the study. It also provides conclusions reached based on the study findings. The last part of the chapter outlines further areas of research in Kiwoso and other Bantu languages at large.

CHAPTER 2

AN OUTLINE OF KIWOSO DESCRIPTIVE GRAMMAR

2.1 Introduction

It has been mentioned in chapter 1 that the main goal of this study is to account for argument realization and argument alternation constructions in terms of distinct functional categories of Voice, vCause and Root in Kiwoso, a Bantu language. Kiwoso is one of the Chagga⁴ languages spoken in Tanzania, more specifically in Kilimanjaro region. In Maho (2009), an online version of the New Updated Guthrie List referential classification of Bantu languages, Kiwoso is classified as one of the languages under zone E, code number 60 (Chagga group). Kiwoso is specifically coded E621D (Maho 2009). The community speaking this language is referred to as Wakiwoso, and they predominantly live in western Kilimanjaro region, in Tanzania. The Wakiwoso refer to their language as Kiwoso, whereas other communities refer to it as Kikibosho (when speaking Swahili). In this study, I refer to this language as Kiwoso, as it is generally referred to by the community where it is spoken. This community practices small scale farming – growing food crops like bananas, maize and beans mainly for subsistence. However, the society is well known for trading and business. The people from this community, particularly the youth, are spread all over Tanzania, and beyond national boundaries for business opportunities.

According to the Languages of Tanzania Project (LOT) conducted in (2009), Kiwoso is estimated to have approximately a total number of 81181 speakers. It has been established that the Moshi rural district has the most speakers (67789) of any area in which the language is spoken. Moshi town has 1370 speakers, the Hai district 9195, and the Siha district 2828 Kiwoso speakers. As the LOT project puts it, Kiwoso ranks sixty ninth (69th) in terms of the number of speakers out of the 150 languages spoken in Tanzania. Region-wise, it ranks sixth (6th) among the 34 languages spoken in the Kilimanjaro region. Notice that information about the number of speakers of a certain language in Tanzania is to a considerable extent unreliable because the official census tends to exclude questions about ethnic groups and matters concerning community languages.

Kiwoso is one of the undocumented Bantu languages of Tanzania and for that reason written texts are largely unavailable. The only available written documents in Kiwoso are a dictionary (Kagaya

⁴Chagga is a blanket (generic) term for the Bantu languages spoken by the Chagga people who live on the slopes of Mount Kilimanjaro in the Northern part of Tanzania (Nurse 1979). In this study, Chagga refers to the speech forms as spoken in different parts of Kilimanjaro region, including Kiwoso, Machame, Rombo, Marangu/Vunjo, Uru, Old Moshi, and Kirua.

&Olomi 2009) and the master's dissertations on verbal extensions (Mushi 2005), locative expressions (Mallya 2011), and vowel harmony (Habibu 2013).

Given the paucity of written documents in Kiwoso, this chapter which presents an outline of some central aspects of the descriptive grammar of Kiwoso is considered an important chapter of the present study, as it offers a brief linguistic profile of Kiwoso for the purpose of providing background information to subsequent chapters, and enabling readers to follow the data examined in this study. However, no attempt is made to present the full details of the descriptive grammar of Kiwoso in this chapter. The grammatical aspects of Kiwoso discussed are viewed as sufficient for the purpose of the present study. A fully-fledged study of Kiwoso grammatical structure is a project for future research.

The chapter is divided into five sections. Section 2.2 presents the general introduction, followed by a short account of the Kiwoso community. Section 2.3 presents the phonological system of the Kiwoso language, providing information on vowel and consonant inventories, as well as syllable structure. While nominal morphology is covered under section 2.4, section 2.5 outlines aspects of the verbal morphology. The general syntax of the clause is presented in section 2.6, and the last part of the chapter summarizes and concludes the chapter.

2.2 The use of Kiwoso

Kiwoso is mainly and widely used in informal contexts in the four districts of Moshi rural, Moshi town, Hai, and Siha, as mentioned in section 2.1. In these four districts, the speakers are bilingual, that is, they speak Kiwoso and Swahili. However, Kiwoso is more dominant in the Moshi-rural district. Following the policy of the Tanzanian government since independence, ethnic languages are prohibited to be used either in education or in any other official contexts. Given this situation, Kiwoso is not used in any formal context or for any official purpose. As such, there are no newspapers, magazines, or books currently published in Kiwoso, neither are there any radio broadcasts in this language. Considering that ethnic languages are not used in formal settings especially in schools and offices as pointed out above, children in primary schools are discouraged to use the indigenous languages, and they are taught to speak only Swahili, the major medium in primary schools. Due to the fact that Kiwoso lacks official status, no standardized orthography of the language exists. In the present study, the general standardized orthography of Bantu languages of Tanzania (Rugemalira et al. 2012) has been utilized for the purpose of providing data for Kiwoso.

2.3 The Kiwoso phonological system

2.3.1 The vowel system

Kiwoso is a typical Bantu language and it is similarly to many Bantu languages in that, it is characterized by five short and five long vowels as presented in figure 2. Long vowels are indicated by the doubling up of the short vowels.

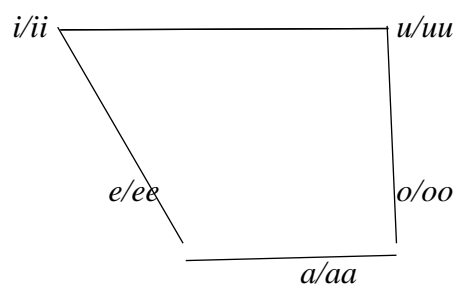


Figure 2: Short and long vowels in Kiwoso

Notice that vowel length in Kiwoso is contrastive, in the sense that length feature changes the meaning of the word. Thus, the language exhibits two kinds of long vowels. It has regular long vowels, as illustrated in table 1, and also long vowels induced by phonological processes including vowel coalescences⁵, as exemplified in table 2.

Example of short vowels	Gloss	Example of long vowels	Gloss
<i>daka</i>	catch	<i>daaka</i>	vomit
<i>kidi</i>	chair	<i>kiidi</i>	center/middle
<i>ela</i>	winnow	<i>eela</i>	to become dark/night
<i>sonu</i>	shame	<i>soonu</i>	have finger crossed
<i>madu</i>	ears	<i>maduu</i>	leaves (of yam)

Table 1: Contrastive vowels

The examples presented in table 1 indicate that vowel length in Kiwoso is contrastive and thus phonemic, in that words which are distinguished in terms of the vowel length, denote different phonemes. This is contrary to the vowel length induced by phonological processes in table 2.

⁵ Coalescence is an assimilatory phonological process by which two dissimilar neighbouring sounds merge into a single sound that has the properties of each of the two original sounds.

Before	After	Gloss
<i>ko+enda</i>	<i>kweenda</i>	you go
<i>ma+imba</i>	<i>meemba</i>	maize
<i>ma+embe</i>	<i>meembe</i>	mangoes
<i>lu+icha</i>	<i>lwuucha</i>	we shall come
<i>ki+esi</i>	<i>kyeesi</i>	it is prohibited
<i>ki+andu</i>	<i>kyaandu</i>	knife

Table 2: Vowel length due to coalescence

Table 2 illustrates words with long vowels as a result of vowel coalescence. Examples in table 2 illustrate that vowel length induced by coalescence is not contrastive (i.e. the length does not change the meaning of the words). In this language, vowels exhibit different phonological processes including harmonization. Vowel harmonization feature mostly in this study, particularly in relation to locative inversion constructions. Vowel harmony refers to a phonological process in which all vowels come to share some phonetic features with contrastive vowels elsewhere in a word or a phrase. In Kiwoso, locative nouns are derived by affixing to the ordinary nouns the suffix *-ni*. However, the example sentences examined in this study and the available literature demonstrate that the last vowel of the locative suffix is no longer available. The derived locative nouns are characterized by vowel harmony, as table 3 shows (see also example sentences with locative nouns in chapters 5 and 6).

Ordinary nouns	Gloss	Locative nouns	Gloss
<i>nlima</i>	mountain	<i>nlimen</i>	on/to the mountain
<i>duka</i>	shop	<i>duken</i>	at/in/to/from the shop
<i>nungu</i>	pot	<i>nungun</i>	in the pot
<i>ruko</i>	kitchen	<i>rukun</i>	at/in/from the kitchen

Table 3: Derived locatives

2.3.2 The consonants

Kiwoso has 20 consonants and 2 glides (semi-vowels). The consonants include plosives, nasals, trills, taps/flaps, fricatives and the two glides, as table 4 illustrates (IPA equivalents). The Kiwoso consonants are produced in seven different places of articulation, as indicated in the following table. Where the IPA symbols differ from the characters used in the inventory, those characters are indicated in table 5, which gives the orthographic symbols and their respective phonetic representations.

	Bilabial	Labio-dental	Alveolar	Post-alveolar	Palatal	Velar	Glottal
plosives	(p) b		t d		c ɟ	k (g)	
nasals	m		n		ɲ	ŋ	
trill			r				
tap/flap			ɾ				
fricatives	β	f	s	ʃ			h
laterals			l				
glides	w				j		

Table 4: Kiwoso consonant inventory

The sounds that appear in parenthesis, for instance [p] and [g], involve sounds that are mostly found in borrowed words. Kiwoso is also characterized by a series of prenasalised consonants which orthographically appear as a combination of the nasal and the plosive. These sounds occur in words such as *mburu* ‘goat’, *ngada* ‘pad’ and *ndara* ‘kernel’. In this study, the following orthographic system of Kiwoso consonants, as presented in table 5 is adopted.

Phonetic symbols	Orthographic symbols	Examples	Gloss
c	ch	<i>achana</i>	divorce
ɟ	j	<i>n’ji</i>	tree
ɲ	ny	<i>manya</i>	cut
ŋ	ng’	<i>nga’na</i>	grow
ɾ	r’	<i>r’ida</i>	sip
b	bh	<i>ibhi</i>	two
s	sh	<i>shoka</i>	ascend
j	y	<i>iyoo</i>	tooth

Table 5: Adopted orthographic system of Kiwoso consonants

It has been pointed out above that Kiwoso has several prenasalised consonants. In Kiwoso, these consonants, ([mb], [ng] and [nd]) are phonemes in their own right, as evidenced by Habibu (2013). In fact, there is clear evidence towards analysing these consonants as independent phonemes. In the first place, Kiwoso has no voiced velar plosives, but it does have native words with a prenasalised [g]. This suggests that the sounds [ng] and [g] are independent sounds. In addition, when the consonants, ([mb], [nd], [ng]) are used in diminutives and augmentatives, they do not undergo changes, as demonstrated in (14). This is also an indication of phonemic value of the prenasalised consonants in Kiwoso.

(14)	basic	diminutive	augmentative
	<i>umbe</i> ‘cow’	<i>ki-umbe</i> ‘small cow’	<i>i-umbe</i> ‘big/bad cow’
	<i>mmba</i> ‘house’	<i>ki-mmba</i> ‘small house’	<i>i-mmba</i> ‘big/bad house’
	<i>nnda</i> ‘field’	<i>kinnda</i> ‘small field’	<i>innda</i> ‘big/bad field’
	<i>ndara</i> ‘kernel’	<i>kindara</i> ‘small kernel’	<i>indara</i> ‘big/bad kernel’
	<i>ngala</i> ‘crab’	<i>kingala</i> ‘small crab’	<i>ingala</i> ‘big/bad crab’
	<i>ngada</i> ‘pad’	<i>kingada</i> ‘small pad’	<i>ingada</i> ‘big/bad pad’

The Kiwoso plosive [b] and fricative [f] lack voice contrast. In most cases, the fricative and stop sounds that appear in a few words are borrowed words from Swahili which get naturalized through a devoicing process. This can be observed in words like *fida* ‘war’, *ikari* ‘car’, and *ibiba* ‘barrel’ from Swahili *vita*, *gari*, and *pipa*, respectively. Borrowed words are assigned appropriate noun class prefixes. As examples, nouns such as *ikari*, and *ibiba* appear with class 5 noun prefix *i-*. The plural counterparts of these nouns appropriately occur with a class 6 noun prefix *ma-*. The Kiwoso noun class system is discussed in section 2.4.1.

2.3.3 Tonal system

Kiwoso displays three tonal patterns, namely a default low, a high tone, and a falling tone. The two tones, high and falling, are contrastive, as illustrated in (15).

(15)	<i>riná</i> ‘hole’	<i>rinâ</i> ‘name’
	<i>iná</i> ‘to drink’	<i>inâ:</i> ‘to wither’
	<i>iwá</i> ‘to be/become’	<i>iwâ:</i> ‘to rise/blossom/ or a spot’

2.3.4 Syllable structure

Across languages, a vowel (or vowel-like) sound is an obligatory part of a syllable. However, it is not uncommon to find a syllable structure with a consonant (C) before the vowel (V). In fact, the CV syllable structure is common across Bantu languages (cf. Hyman 2003b). Generally, a syllable has two basic elements which are the onset (one or more consonants) and the rhyme (which is basically a vowel). Rhyme is regarded as the nucleus of the syllable which may be followed by one or more consonants, technically known as coda. Like many Bantu languages, Kiwoso is characterized by an open syllable system, a system in which the syllable constitutes an onset and a nucleus, but no coda. The syllable structure which contains a coda is known as a closed syllable. Generally, syllable structure can be illustrated as in figure 3.

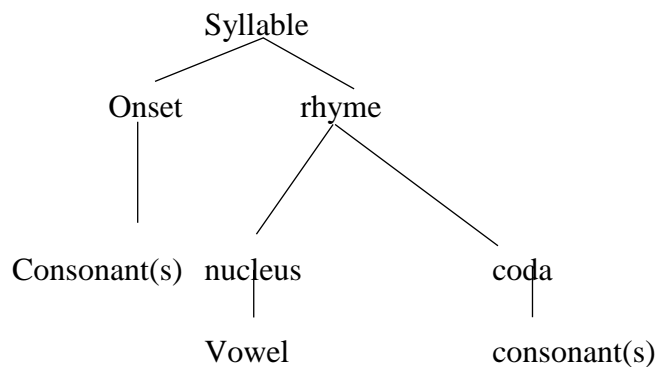


Figure 3: Syllable structure

Figure 3 presents the general structure of the syllable. It has been mentioned earlier in this section that Kiwoso is characterized by an open syllable system. The canonical shape of the syllable in this language is CV. However, in Kiwoso, a vowel without consonant can form a syllable, as evidenced in table 6. Kiwoso is also characterized by syllabic nasals, in that nasal sounds such as [m] and [n] constitute syllables. The syllable structures found in Kiwoso are exemplified in table 6, and schematically illustrated in figures 3 and 4.

Syllable structures	Examples	Gloss
CV	<i>ma-nya</i>	cut
V	<i>a-ba</i>	swear
N	<i>n-nda</i>	field
CGV	<i>shyaa-du</i>	shoes
NCV	<i>mbu-ru</i>	goat
GV	<i>ya-a</i>	here

Table 6: Kiwoso syllable structures with examples

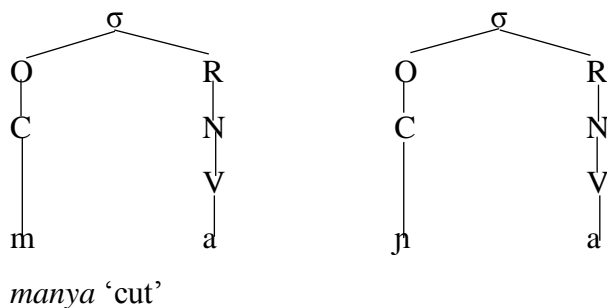


Figure 4: Example of CV syllable structure in Kiwoso

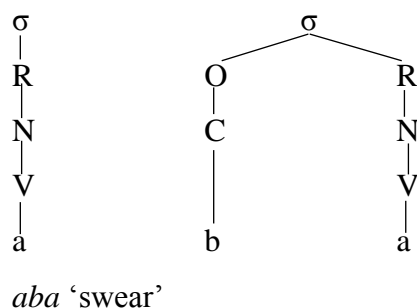


Figure 5: Example of V and CV syllable structure in Kiwoso

The above structures demonstrate open syllable structure in Kiwoso. The word *manya*, ‘cut’, constitutes two open syllables in which the first one involves the onset (consonant) /m/ and the rhyme (the nucleus, which is the vowel) /a/. The second one involves onset /n/ and the rhyme /a/. The word *aba* ‘swear’ involves two syllables: the first one is formed by vowel /a/ (V), whereas the second one involves a consonant and a vowel (CV). Notice that syllabic nasals found in this language have similar structures with the syllable which involves just a vowel, as figure 5 demonstrates.

2.4 Nominal morphology

2.4.1 Kiwoso noun class system

Bantu languages are generally characterized by a number of noun classes (cf. Maho 1999; Katamba 2003). The noun class system found in Bantu languages is based on different semantic considerations, different from the gender system found in many European languages. These noun classes are numbered systematically for all Bantu languages, following the numbering system first proposed by Bleek (1862, 1869), which was later extended by Meinhof (1899, 1906) and then Katamba (2003).

Although the Kiwoso noun class system is not the main focus of this chapter, this aspect is discussed in some details for the reason that the study on argument realization and alternations is rooted to the argument structure of the verb. Nominal agreement morphology in Kiwoso just like in Bantu languages in general, forms part of the verb morphology through the subject and object agreement prefixes (cf. table 7 and examples in chapters 5 & 6). The noun class system in Kiwoso, therefore, receive due attention.

Kiwoso displays the typical Bantu noun class characteristics in that it exhibits 17 noun classes, as illustrated in table 7. In each noun class presented in the table, the noun prefix, an example word, the subject and object agreement morphemes, adjective concord, and the three demonstrative forms are exhibited. The noun class prefixes found in Bantu languages determine agreement between the noun

and its modifiers, and agreement with constituents of phrases and clauses. In table 7, the noun class prefixes are indicated and for each noun, with the corresponding agreement morpheme for subject, object, adjective, and also the demonstratives are given.

Class	Prefix	Example	Gloss	AGRs	AGRo	Adj-agr	DEM1	DEM2	DEM3
1	<i>mu-</i>	<i>mu-na</i>	child	<i>a</i>	<i>n</i>	<i>n</i>	<i>e-tu</i>	<i>e-to</i>	<i>u-lya</i>
1a	<i>mu-</i>	<i>mu-nama</i>	relative	<i>a</i>	<i>n</i>	<i>n</i>	<i>e-tu</i>	<i>e-to</i>	<i>u-lya</i>
2	<i>wa-</i>	<i>wa-na</i>	children	<i>wa</i>	<i>wa</i>	<i>wa</i>	<i>e-wa</i>	<i>e-wo</i>	<i>wa-lya</i>
3	<i>n-</i>	<i>n-ji</i>	tree	<i>u</i>	<i>i</i>	<i>n</i>	<i>e-tu</i>	<i>e-to</i>	<i>u-lya</i>
4	<i>mi-</i>	<i>mi-ji</i>	trees	<i>i</i>	<i>i</i>	<i>mi</i>	<i>e-ti</i>	<i>e-to</i>	<i>tya</i>
5	<i>i-</i>	<i>i-du</i>	ear	<i>lyi</i>	<i>lyi</i>	<i>lyi</i>	<i>e-lyi</i>	<i>e-lyo</i>	<i>lya</i>
6	<i>ma-</i>	<i>ma-du</i>	ears	<i>a</i>	<i>wa</i>	<i>ma</i>	<i>e-wa</i>	<i>e-wo</i>	<i>alya</i>
7	<i>ki-</i>	<i>ki-andu</i>	knife	<i>ki</i>	<i>ki</i>	<i>ki</i>	<i>e-kyi</i>	<i>e-kyo</i>	<i>kya</i>
8	<i>shi-</i>	<i>shi-andu</i>	knives	<i>shi</i>	<i>shi</i>	<i>shi</i>	<i>e-shi</i>	<i>e-sho</i>	<i>shya</i>
9	<i>n-</i>	<i>mburu</i>	goat	<i>i</i>	<i>i</i>	<i>ngi</i>	<i>e-yi</i>	<i>e-yo</i>	<i>iya</i>
10	<i>n-</i>	<i>mburu</i>	goats	<i>ti</i>	<i>ti</i>	<i>ngi</i>	<i>e-ti</i>	<i>e-to</i>	<i>tya</i>
11	<i>u-</i>	<i>u-dende</i>	leg	<i>lu</i>	<i>lu</i>	<i>lu</i>	<i>e-lu</i>	<i>e-lo</i>	<i>lou</i>
14	<i>u-</i>	<i>u-doko</i>	laziness	<i>lu</i>	<i>lu</i>	<i>lu</i>	<i>e-lu</i>	<i>e-lo</i>	<i>lou</i>
16	<i>a-</i>	<i>a-ndo</i>	place	<i>ku</i>	<i>ku</i>	<i>ku</i>	<i>yaa</i>	<i>yoo</i>	<i>alya</i>
17	<i>ku</i>	<i>ku-ndo</i>	place	<i>ku</i>	<i>ku</i>	<i>ku</i>	<i>kunu</i>	<i>kulya</i>	<i>kulya</i>

Table 7: Kiwoso noun class system

The numbers of the noun classes presented in table 7 are in singular-plural pairing system. In other words, the classes with numbers 1,3,5,7,9,11 contain singular nouns, whereas the classes with numbers 2, 4, 6,8,10 contain the plural counterparts. However, not all classes conform to this pairing system. For example, class 11 nouns have their plural counterparts in class 6, while for semantic reasons, class 14 (mainly characterized by abstract nouns) lacks plural forms. The class 11/6 plural pairing is as exemplified in (16). The singular-plural pairing system of noun classes found in Kiwoso is illustrated in figure 6.

- (16) a. *Lelo nyalemanya udende na kyaara*
Lelo ni- a- le- many- a u-dende na kyaara
 Lelo INIT- AGRs- PST- cut- FV 11leg by 7axe
 ‘Lelo cut (his) leg by (means of) an axe’
- b. *Lelo nyalemanya madende na kyaara*
Lelo ni- a- le- many- a ma-dende na kyaara
 Lelo INIT- AGRs- PST- cut- FV 6-leg by 7axe

‘Lelo cut (his) legs by (means of) an axe’

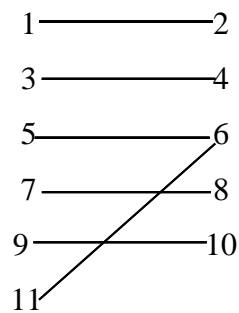


Figure 6: Singular/plural pairings in Kiwoso

As Katamba (2003) notes, in Bantu languages, generally, the class 15 prefix (*ku-*) is a prefix for infinitive nouns. However, Kiwoso differs from the majority of Bantu languages in relation to the infinitive marker. In Kiwoso, the infinitive is expressed by the morpheme *i-*, the prefix of class 5 nouns. Thus Kiwoso lacks a class 15 nouns. The infinitive morpheme in Kiwoso can be illustrated in infinitives such as *ikora* ‘to cook’, *idema* ‘to cultivate’, *isoma* ‘to read’, and *iseka* ‘to laugh’.

With regard to the gender⁶ resolution rule, Kiwoso employs several strategies in assigning nouns and their appropriate agreement affixes to a particular gender. For example, when two different nouns of the same class occur in coordination, the corresponding plural prefix is used, as example (17) illustrates.

- (17) *kiliko na kikabu shilekumbo na waka*
kiliko na kikabu shi-le-kumb-o
 7spoon and 7basket 8-PST-sell-PASS
 ‘The spoon and the basket were sold’

The nouns *kiliko* ‘spoon’ and *kikabu* ‘basket’ are class 7 nouns, thus they take their plural forms from class 8. Therefore, whenever two nouns from the same class occur in coordination, the plural form is used as a gender resolution rule. On the other hand, when inanimate nouns belonging to different

⁶ In Bantu languages, gender is defined in terms of the nouns that trigger corresponding morphology agreement pattern. The term gender is also used to refer to the pairs of noun classes, particularly the one class that contains the plural forms of the other.

classes occur in coordination, the agreement obtains between the verb and the prefix of the closest noun, as examples in (18) demonstrate.

- (18) a. *kyaara na ubanga luledeka*
ki-ara na u-banga lu- le- dek- a
 7-axe and 11-sword 11AGRs-PST-loose- FV
 ‘The axe and the sword got lost’
- b. *ubanga na kyaara kiledeka*
u-banga na ki-ara ki- le- dek- a
 11-sword and 7-axe- 7AGRs-PST- loose- FV
 ‘The sword and the axe got lost’
- c. *ubanga na kyaara shiledeka*
u-banga na ki-ara shi- le- dek- a
 11-sword and 7-axe 8AGRs-PST- loose- FV
 ‘The sword and the axe got lost’

In example (18a), the verb ‘*deka*’ ‘get lost’ agrees with the class 11 prefix (*lu-*) of the noun *ubanga* ‘sword’, whereas in (18b), the verb selects the class 7 prefix ‘*ki-*’, the prefix for the noun *kyaara* ‘axe’. Therefore, as mentioned above, when two nouns of different classes occur in a coordinated noun phrase, the gender resolution rule determines that the noun closest to the verb triggers subject-verb agreement. However, it is not uncommon to find some speakers of Kiwoso using class 8 prefix (*shi-*), (the plural of class 7) in the coordination of two inanimate nouns from different classes, as (18c) evidences.

There are instances where nouns referring to human beings for instance *muna* ‘child’ and animate or inanimate such as *kidi* ‘chair’ occur in coordination. In such instances, coordination is avoided and a different construction is used to resolve the gender conflict, as (19) demonstrates.

- (19) *muna nyaledooka na kiti kikadooka*
mu-na ni- a- le- dook-a na kiti ki- kadook-a
 1child INIT- AGRs- PST- break-FV and 7chair 7AGRs-break-FV
 ‘The child broke and the chair broke too’

2.4.2 The locative noun classes

In many Bantu languages, it is common to find both locative (i.e. nouns with inherent locative meaning) and locativised derived nouns (i.e. nouns derived by locative affixes) (cf. Rugemalira 2004). The two categories of locative nouns also exist in Kiwoso. In many Bantu languages, a number of ordinary nouns can be reclassified into locative nouns by affixation of the locative noun class prefixes *pa-*, *ku-*, and *mu-* without dropping the original class prefix of the ordinary nouns (Carstens 1997; Rugemalira 2004). The locative classes *pa-*, *ku-*, and *mu-* correspond in meaning to ‘on’, ‘to’, and ‘in’, respectively. Usually, in languages where all three locative classes are productive, for instance, Shona (Salzmann 2004) and Chichewa (Carstens 1997; Mchombo 2004), the derived locative nouns are associated with a series of concords of the appropriate locative class prefixes (see also chapter 4, section 4.9).

Unlike many Bantu languages, locativised nouns in Kiwoso are derived by affixation of a locative suffix. The general suffix employed is *-ni*, with an indication of vowel harmony effect. For instance, the vowel /a/ of the ordinary nouns in Kiwoso, changes into /e/ in locativised nouns. However, back vowels show no changes. Depending on the nature of the verb and the contexts, the locative suffix *ni-* in Kiwoso demonstrates all nuances of meanings expressed by the locative noun prefixes *pa-*, *ku-*, and *mu-*, as evidenced in (20). The final vowel of the locative suffix is apparently lost, as the locativised nouns used in this study demonstrate.

- (20) a. *wana walelala kitaren*
 wa-na *wa-* *le-* *lal-* *a* *kitare-* *n*
 2-child 2AGRs-PST- sleep- FV 7bed- LOC
 ‘Children slept on the bed’
- b. *waka wakora rukon*
 wa-ka *wa-* *kor-* *a* *ruko-* *n*
 2-woman 2AGRs-cook- FV kitchen-LOC
 ‘Women cook in the kitchen/fireplace’
- c. *waka waleshaama nlimen*
 wa-ka *wa-* *le-* *shaam-a* *nlime-* *n*
 2-woman 2AGRs-PST- climb- FV 3mountain-LOC
 ‘Women climbed to the mountain’

Although Kiwoso has lost the basic locative nouns, it has maintained class 17 prefix (*ku-*) in its agreement system, as examples in (21) illustrate.

- (21) a. *kulya mmba koke kuleida wandu*
kulya mmba koke ku-le- id- a wa-ndu
 DEM2 9house POSS 17-PST-enter-FV 2-people
 ‘There in his/her house entered people’
- b. *kulya kitaren koke kulelala waka*
kulya kitare-n koke ku-le- lal- a wa-ka
 DEM2 7bed-LOC POSS 17-PST-sleep-FV 2-woman
 ‘There on his/her bed slept women’

From examples, in (21), the locative prefix 17 (*ku-*) controls agreement on the verb, demonstrative, and possessives, suggesting that derived locatives in Kiwoso exhibit locative semantics in the morphology of other dependent elements.

2.4.3 Demonstratives

Kiwoso displays three semantically distinct demonstrative forms. The primary function of demonstratives in Kiwoso is to express the notion of deixis and anaphora discourse function. As in other Bantu language, Kiwoso demonstratives exhibit agreement with different nouns, as illustrated in table 7. The demonstrative one (DEM1) is equivalent in meaning to the English ‘this’ or ‘these’. It is used for reference to entities which are relatively near to both the speaker and the addressee. The structure of DEM1 involves a vowel preceding the noun prefix. The demonstrative two (DEM2), is comparable in meaning to the English ‘that’ or ‘those’ and is used to refer to things that are distant from the speaker, but relatively closer to the addressee. The structure of DEM2 is similar to the structure of DEM1 except that in DEM2, the vowel of the noun prefix changes to *o-*. The demonstrative three (DEM3) corresponds to English ‘that over there’ or ‘those over there’ and is used with entities which are relatively far from both the speaker and the addressee, although within the view of the two parts. DEM3 is generally used when objects are pointed or signified by a gesture. DEM3 is also used referentially in a discourse situation to indicate that the entities have been previously mentioned or talked about. The Kiwoso demonstratives are illustrated in (22).

- (22) a. *munatu nyalesambya ng’o take*

mu-na etu ni- a- le- sambi-a ng'o take
 1-child DEM1INIT-AGRs- PST- clean-FV 10clothes his/hers
 'This child washed his/her clothes'

- b. *munato nyalesambya ng'o take*
mu-na eto ni- a- le- sambi-a ng'o take
 1-child DEM2INIT- AGRs- PST- clean-FV 10clothes his/hers
 'That child washed his/her clothes'

- c. *muna ulya nyalesambya ng'o take*
mu-na ulya ni- a- le- sambi-a ng'o take
 1-child DEM3INIT- AGRs- PST- clean-FV 10clothes his/hers
 'That child over there washed his/her clothes'

2.4.4 Relative pronouns

In Kiwoso, the demonstrative and relative pronoun are homophonous. Like other modifiers, the morpheme which marks relative pronoun show agreement with the respective antecedent in a sentence with a relative clause, as (23) illustrates.

- (23) *nyeeninga sabuni muna ulyo asambya ng'o*
ni- a- ining-a sabuni mu-na ulyo a- samby-a ng'o
 INIT- AGRs- give-FV 9soap 1-child REL 1AGRo-wash- FV 10clothes
 'He/she gives soap (to) the child who washes the clothes'

Although demonstratives and relative pronouns in Kiwoso are similar in morphological forms, the two forms do not co-occur. Whenever a relative pronoun is used, its corresponding demonstrative is implied.

2.5 Verbal morphology

2.5.1 The verbal system of Kiwoso

Bantu languages are known for their agglutinative morphology. This can be evidenced in the structure of the verb which can consist of a number of inflectional and derivational morphemes. The inflectional and the derivational suffixes associated with the verbal system are usually regular. Like other Bantu languages, the Kiwoso verbal domain is complex, comprising of a number of inflectional

prefixes and derivational suffixes. Kiwoso is characterized by both simple and complex verbs. Simple verbs involve roots without extensions, whereas complex verbs comprise of roots having several extensions. The inflectional verbal prefixes found in Kiwoso include the initial element (INIT), subject agreement prefix (AGRs), tense morphemes, object agreement prefixes (AGRo), and the reflexive morpheme. The derivational suffixes found in Kiwoso include various verbal extensions, namely the applicative, passive, causative, stative, and reversive suffixes, as discussed in 2.5.2.6. Kiwoso exhibits different forms of verb categories including the copular, transitive, and intransitive forms. Transitive uses of verbs can be classified into two namely, monotransitive and ditransitive, as exemplified in sections 2.5.1.2 and 2.5.1.3, respectively.

2.5.1.1 Copular verbs

Kiwoso consists of copular verbs which cannot be characterized as either transitive or intransitive because they cannot occur alone in the predicate argument structure of the verb. Therefore, copular verbs must be accompanied by a complement. So, these verbs relate the subject argument to a complement category. Copular verbs in Kiwoso can take a noun (or a noun phrase), like *mwaliimu* ‘a teacher’ (24a), an adjective, such as *chaa* ‘hungry’ (24b), or an adverb of location including a verb like *shuule* ‘school’ (24c) as their complements, as the examples in (24) demonstrate.

- (24) a. *nyalewa mwaliimu*
 ni- a- le- w- a mu-alimu
 INIT-AGRs- PST- be- FV 1teacher
 ‘She/he became a teacher’
- b. *nyeesye chaa*
 ni- a- isye chaa
 INIT-AGRs- feel hungry
 ‘She/he feels hungry’
- c. *wana wakei shuule*
 wana wa- kei shuule
 2-child 2AGRs-be 9school
 ‘Children are at school’

2.5.1.2 Monotransitives

Monotransitive forms in Kiwoso involve two arguments which can be identified as the subject and the direct object arguments, or an agent and a theme/patient arguments, respectively. The examples in (25) illustrate monotransitive verbs. These monotransitive verbs have similar characteristics to the causative verb variants discussed in this study (cf. especially chapter 5).

- (25) a. *waka walekora kelya*
 wa-ka wa- le- kor- a kelya
 2-woman 2AGRs-PST- cook- FV 7food
 ‘Women cooked some food’
- b. *Ali nyaletana mmba*
 Ali ni- a- le tana- a mmba
 Ali INIT- AGRs- PST- build- FV 9house
 ‘Ali built the house’

In (25), the noun *waka* ‘women’ in (25a) functions as the subject argument (an agent), while *kelya* ‘food’ is the argument object (theme) of the verb *kora* ‘cook’. In (25b), *Ali* denotes the subject argument (an agent), whereas *mmba* is the argument object (theme) of the verb *tana* ‘build’.

2.5.1.3 Ditransitives

Ditransitive verb uses in Kiwoso is associated with three arguments; one external and two internal arguments, usually the theme and patient arguments, as illustrated in (26).

- (26) a. *baba nyakoba Amisi besa*
 baba ni- a- kob- a Amisi besa
 father INIT- AGRs- borrow-FV Amisi 9money
 ‘Father borrows Hamis some money (father borrows money from Hamis)’
- b. *woora muna irinda lyako*
 wa- or- a mu-na irinda lyako
 2AGRs-show- FV 1-child 5dress mine
 ‘They show the child my dress’

The verb *koba* ‘borrow’ in (26a) has the subject argument *baba* ‘father’ and two object arguments, where the object *Amis* is commonly referred to as indirect object argument, while *besa* ‘money’ is the direct object argument. In (26b), the pronoun *wa-* ‘they’ is the subject argument, *muna* ‘child’ is an indirect object argument and *irinda* ‘dress’ is a direct object argument.

2.5.1.4 Intransitives

Intransitives have a single argument. Intransitive verbs have been generally categorized into two classes, namely unergative and unaccusative verbs (Perlmutter 1978). The two subclasses are defined and distinguished in terms of their underlying syntactic structure. According to the Government and Binding theory, the single argument of unaccusative verbs is an object (an internal argument), whereas the single argument of unergative verbs is a subject (an external argument) (cf. Levin & Rappaport Hovav 1995). Generally, unaccusative verbs have themes but not agent arguments, while unergative verbs contain an agent but not theme arguments. The sentences in (27) exemplify the two subclasses of intransitive verbs in Kiwoso.

- (27) a. *nungu ilebarika*
nungu i- le- bar- ik- a
 9pot 9AGRs-PST- STAT- STAT- FV
 ‘The pot got broken’
- b. *waka walefina*
waka wa- le- fin- a
 2-woman 2AGRs-PST- dance- FV
 ‘Women danced’

The DP *nungu* ‘pot’ in (27a) is a theme argument, an entity that changes state. By contrast, (27b) consists of an agent argument, the DP *waka* ‘women’. It has been pointed out that typical unaccusative verbs involve change of state or location, and in most cases, these verbs can be causativized (cf. van Gelderen 2013). This scholar postulates that unergative verbs involve willed, volitional controlled actions with an agent at the centre. The properties of unergative and unaccusative intransitive verbs are central in the analysis of argument realization and alternations of change of state and change of location verbs in Kiwoso, as examined in chapters 5 and 6, respectively.

2.5.1.5 Derived verbs

Different suffixes can be attached to the verb roots in Kiwoso to derive a new verb. For example, the applicative *-i-*, and the causative *-is-*, can be affixed to intransitive verbs to derive the monotransitive counterparts. These morphemes can also be affixed to monotransitives to derive ditransitives. The derivational of verbs in Kiwoso is illustrated in (28) and (29).

(28) *Jane nyaurya mai isulya*

Jane ni- a- ur- i- a mai isulya
 Jane INIT- AGRs- buy- APPL- FV grandmother 5blanket

‘Jane buys grandmother blanket/Jane buys a blanket for the grandmother’

(29) *waka wafirisa wana*

wa-ka wa- fir- is- a wa-na
 2-woman 2AGRs-cry-CAUS- FV 2-child

‘Women make the children cry’

Prototypically, the verb *ura* ‘buy’ in Kiwoso involves two arguments: an agent argument and a theme. However, when the applicative suffix *-i-* is affixed to the verb root, it introduces an additional argument, changing the verb into a ditransitive verb, as (28) illustrates. The applicative verb in (28) has three arguments, namely the agent (Jeni), the beneficiary (grandmother) and the theme (blanket). On the other hand, the verb *fīira* ‘cry’ is a one-place predicate. The causative morpheme *-is-*, adds one argument position, which changes the verb into a two-place predicates containing an agent (causer) *waka* ‘women’, and the patient, *wana* ‘children’, as evidenced in (29). Notice that in Kiwoso the verb *fīira* ‘cry’ undergoes vowel shortening after the insertion of the causative morpheme *-is-*, hence ‘*fīira*’ becomes ‘*firisa*’, as (29) exemplifies.

It has been mentioned previously that this chapter is intended to offer an outline of Kiwoso descriptive grammar. There is no attempt made to present detailed information, for example, about semantic verb classes. Scholars perspectives on semantic classification of verbs relevant for this study have been discussed in relevant sections, as evidenced in subsection 1.8.1, and sections 3.7 and 4.13. In relation to Kiwoso, example sentences of various semantic verb classes are demonstrated in (sub)section 5.5.2 and 5.6.

2.5.2 The Kiwoso verbal structure

As in other Bantu languages, the canonical syllable structure of the verb root in Kiwoso is CVC. Longer syllable structures are derived through verbal extension suffixes and reduplication. However, unlike many Bantu languages which consist of a few CV roots, the number of short verbs (i.e. CV-roots) in Kiwoso is considerably more (cf. table 10). The root of the verb is accompanied by several prefixes and suffixes, exhibiting the agglutinative nature of a typical Bantu language, as table 8 illustrates.

1	2	3	4	5	6	7	8	9	10
INIT	AGRs	TENSE	ASP	AGRo1	AGRo2	ROOT	EXT	FV	NEG
<i>n</i>	<i>a</i>	<i>le</i>	<i>nde</i>	<i>ki</i>	<i>m</i>	<i>kor</i>	<i>i</i>	<i>e</i>	<i>n</i>
<i>naleendekimkoryen</i> ‘she/he had not cooked it for her/him’									

Table 8: Kiwoso verbal morphology template

2.4.2.1 The initial element

The initial element *ni-* occurs only when the subject of the sentence is the third person singular or from class one nouns, as (30a) demonstrates. In a natural speech, the vowel /i/ of the initial element glides due to the influence of the following sound, the vowel /a/. The exact meaning and/or function of this element is not quite clear because it can be omitted without affecting the grammaticality of the sentence, as evidenced in (30b).

- (30) a. *muna nyalekora kelya*
mu-na ni- a- le- kor-a kelya
 1-child INIT- 1AGRs-PST-cook-FV 7food
 ‘The child cooked some food’
- b. *muna alekora kelya*
mu-na a- le- kor- a kelya
 1-child 1AGRs-PST- cook- FV 7food
 ‘The child cooked some food’

The verb with the initial element *ni* in (30a), and the verb without such an element in (30b), are both grammatical and semantically similar. However, Kiwoso native speakers consulted on the acceptability judgements of the two sentences pointed out that although the absence of initial element in (30b) does not make the sentence ungrammatical, its presence renders the sentence more natural.

2.4.2.2 The subject agreement prefix (AGRs)

The agreement of the subject appears before the tense morpheme but after the initial element (where present). It usually agrees in person and the respective noun class prefix of the subject DP, as (31) illustrates.

- (31) a. *muna nyalebaara kikombe*
mu-na ni- a- le- baar- a kikombe
 1-child INIT- 1AGRs-PST- break- FV 7cup
 ‘The child broke the cup’
- b. *wana walebaara kikombe*
wa-na wa- le- baar- a kikombe
 2-child 2AGRs-PST- break- FV 7cup
 ‘Children broke the cup’
- c. *kyaara ki-le-many-a n’ji*
kyaara ki- le- many- a n’ji
 7axe 7AGRs-PST- cut- FV 3tree
 ‘An axe cut the tree’
- d. *waleenda ulaya*
wa- le- end- a ulaya
 2AGRs-PST- go- FV Europe
 ‘They went to Europe’

The examples in (31) demonstrate that subject agreement in Kiwoso is realized on the verb in accordance with the noun class system. (31d) demonstrates that subject agreement is an obligatory morpheme in the verbal structure, thus regardless of the presence or absence of the lexical noun, its agreement must appear in the verbal morphology. However, as in most Bantu languages, imperative verb constructions do not require a subject agreement prefix in Kiwoso, as (32) demonstrates.

- (32) *ocho yaa* (you) come here! *imba* sing!
kaba makoti (you) kneel down! *somuka* get out!

2.4.2.3 Tense and aspect (TA)

Tense and aspect are two distinct terms which in earlier grammars have often not been conceptually distinguished, hence regarded as a single grammatical concept, with tense having been used as a general term for both. However, currently there is consensus in linguistic literature that the two terms refer to distinct linguistic categories, thus should be distinguished. Tense has been regarded as the grammatical category which is concerned with the realization of the time in which a state or action denoted by a verb occurs, whereas aspect refers to the grammatical category which indicates the (in)completeness of the event from the speakers' perspective (Nurse 2008; Anyanwu 2010).

Generally, tense can be regarded as a representation of time in relation to the speaker and the described events, whereas aspect relates to various representations of time of an event described in a sentence. Indeed, (Comrie 1976) asserts that both tense and aspect are concerned with time, though in a very different ways. He argues that, whereas tense locates situations (events) in time, aspect relates to the internal temporal constituency of the situations (events). Tense is, therefore, event-external time, while aspect is event-internal time (Comrie 1976:5).

As in other Bantu languages, Kiwoso exhibits tense and aspect distinctions. The TA slot in Kiwoso is occupied by both tense and aspect, but the tense morphology normally occurs first, followed by aspect. Nurse (2008) points out that marking tense before aspect is a typical characteristic of most Bantu languages. Similar to other agreement affixes, namely subject and object, tense and aspect morphology is obligatory part of indicative sentences in Kiwoso.

Tenses such as the simple past and future have distinct morphology in Kiwoso. The simple past is characterized by *-le-*, whereas the simple future is characterized by a vowel, which is the copy of the vowel of the subject agreement prefix. However, the simple present tense is not realized by distinct morphology in this language. The simple present, past, and future tenses in Kiwoso are exemplified in sentences (33) and (34).

- (33) a. *wana wakora kelya*
 wa-na wa- kor- a kelya
 2-child 2AGRs-cook-FV 7food
 ‘Children cook some food’
- b. *wana walekora kelya*
 wa-na wa- le- kor-a kelya

2-woman 2AGRs-PROG-cook-FV- PROG 7food

‘The women are cooking some food (incomplete action)’

b. *waka wameekora kelya* ***perfective aspect***

waka *wa-* ***me-*** *i-* *kor-* *a* *kelya*

2-person 2AGRs-PERF- INF- cook- FV 7food

‘The women have (already) cooked some food (completed action)’

c. *waka wakoraa kelya* ***habitual aspect***

waka *wa-* *kor-* *a-* ***a*** *kelya*

2-woman 2AGRs-cook- FV- HAB 7food

‘Women (usually) cook some food’

(36) a. *wandu waasomukaa mmba* ***progressive aspect***

wandu *wa-* ***a-*** *somuk-a-* ***a*** *mmba*

2-person 2AGRs-PROG-exit- FV- PROG 9house

‘People are exiting (getting out of) the house’

b. *wandu wameesomuka mmba* ***perfective aspect***

wa-ndu *wa-* ***me-*** *i-* *somuk-a* *mmba*

2-person 2AGRs-PERF-INF- exit- FV 9house

‘People have (already) exited (gone out of) the house’

c. *wandu wasomukaa mmba (utiko)* ***habitual***

wandu *wa-* *somuk-a-* ***a*** *mmba (utiko)*

2-person 2AGRs-exit- FV- HAB 9house (morning)

‘People (usually) exit (get out of) the house (in the morning)’

The examples in (35) and (36) illustrate the present tense and their perfective and imperfective aspects. (35a) and (36a) demonstrate the progressive aspect, which denotes an incomplete action or event (i.e. imperfective aspect), whereas (35b) and (36b) are instances of perfective aspects which indicate the sense of completion of the event denoted by the verb. In (35c) and (30c), the event is described as a tendency or habit, despite lacking that sense of perfective or completeness. As a result, this event is regarded as an imperfective habitual.

2.5.2.4 The object agreement prefix (AGRo)

The object agreement in Kiwoso is prefixed immediately to the verb stem. Just like subject agreement, the object agreement prefix matches the person and number or noun class features of the respective object noun, as (37) illustrates.

- (37) a. *ngilekidoota*
 ngi- le- ki- doot-a
 1SG- PST- OM-break-FV
 ‘I broke it’
- b. *alewawaanga*
 a- le- wa- waang-a
 3SG PST- OM- call- FV
 ‘she/he called/invited them’

Notice that object agreement unlike subject agreement is an obligatory prefix of the verb structure in Kiwoso. It seems that whenever the object noun is present, the object agreement is optional; the opposite is also the case, as examples in (38) and (39) demonstrate.

- (38) a. *ngiledoota kiti*
 ngi- le- doot- a kiti
 1SG- PST- break- FV 7chair
 ‘I broke the chair’
- b. *ngilekidoota (kidi)*
 ngi- le- ki- doot-a (kiti)
 1SG- PST- OM- break-FV (7chair)
 ‘I broke it (the chair)’
- (39) a. *alewaanga wana*
 a- le- waang-a wa-na
 3SG PST- call- FV 2-child
 ‘She/he called/invited the children’
- b. *alewawaanga (wana)*
 a- le- wa- waang-a (wa-na)
 3SG PST- OM- call- FV (2-child)
 ‘She/he called/invited them (the children)’

It is evident in examples (38b) and (39b) that the object nouns, *kidi* ‘chair’ and *wana* ‘children’, respectively are optional because they are associated with an agreement prefix on the verbs. However, the object nouns are obligatory, as illustrated in (38a) and (39a) because they are not associated with an object agreement prefix. This suggests that the object agreement in Kiwoso is associated with the pronominal. However, for pragmatic purposes, the lexical object nouns and the object agreement prefix may co-occur.

Kiwoso, like many other Bantu languages exemplify double object constructions. As mentioned earlier, the object agreement prefix in Kiwoso may optionally co-occur with the corresponding object DP, and when it does, it shows agreement with the noun class of the corresponding object (cf. examples 38 and 39). Double object constructions in Kiwoso is exemplified in (40) and (41).

- (40) a. *walekimningya*
 wa- le- ki- m- ning- i- a
 3PL- PST- AGRo-AGRo-give- APPL- FV
 ‘They gave it to him/her’
- b. **walemkininyga*
 wa- le- m- ki- ning- i- a
 3PL- PST- AGRo-AGRo-give- APPL- FV
 ‘They gave him/her to it’
- (41) a. *ngilewammbangya*
 ngi- le- wa- m- mbang-i- a
 1SG- PST- AGRo-AGRo-call- APPL- FV
 ‘I called them for him/her’
- b. **ngilemwambangya*
 ngi- le- m- wa- mbang-i- a
 1SG- PST- AGRo-AGRo-break- APPL- FV
 ‘I called him/her for them’

The examples in (40) and (41) give evidence that restrictions obtain on the order of objects in double object constructions in Kiwoso. The examples in (40) demonstrate that the features of animacy is relevant in this regard. The object agreement prefix for class 1 (*m-*) appears closer to the verb root,

whereas the inanimacy agreement (*ki-*) is placed farthest from the root. The opposite order renders the construction ungrammatical, as (40b) evidences. On the other hand, the examples in (41) illustrate that the order of object argument in double object constructions is determined by the feature number. The two object agreement prefixes in (41) are distinguished by the number. Whenever singular and plural (human) entities are associated with an object agreement prefix, the singular noun appears closest to the verb, whereas the plural occurs farther from the root.

The semantic roles of the verb determine the order of object arguments on double object constructions in Kiwoso. As examples in (40) and (41) demonstrate, the beneficiary argument always occurs closer to the verb than the theme (40a) and the patient arguments (41a).

The locative object agreement prefix can also be affixed to the verb root. This argument prefix (i.e. the locative class 17 prefix *ku-*) in Kiwoso has locative semantic content even when a lexical locative noun is absent. The properties of the locative argument in Kiwoso are discussed in chapter 6, particularly in sections 6.2-6.5.

2.5.2.5 The verb root

The verb root or verb radical is the core of the verb to which different extensions can be affixed. The verb bears the basic meaning of the event or state described by the verb. It has been pointed out above that in Kiwoso, as in other Bantu languages, the verb is a complex word category that can consist several inflectional and derivational morphemes (cf. sections 2.5.2.1-2.5.2.4 and 2.5.2.6.1-2.5.2.6.2).

As Schadeberg (2003) puts it, the canonical form of the verb root of most Bantu languages is CVC. Kiwoso exhibits the same structure in that the root has a CVC structure although other syllable structures also occur. This canonical structure and other common structures of the verb root found in Kiwoso are as exemplified in table 9.

Root structure	Example	Gloss	Root structure	Example	Gloss
CVC	<i>kor-a</i>	cook	CVCVC	<i>surum-a</i>	Hide
	<i>dich-a</i>	ran		<i>somuk-a</i>	exit
	<i>lem-a</i>	bend		<i>rumbuka</i>	fly
	<i>rach-a</i>	slash		<i>sukum-a</i>	push
	<i>kam-a</i>	milk		<i>torok-a</i>	escape
	<i>rund-a</i>	work		<i>lakan-a</i>	dissociate
	<i>ded-a</i>	speak		<i>bakana</i>	fight (each other)
	<i>many-a</i>	cut	VCVC	<i>orok-a</i>	stand
	<i>fina</i>	dance		<i>ongom-a</i>	bow/bend

	<i>lem-a</i>	bend			<i>eken-a</i>	count
	<i>rid-a</i>	sip			<i>idem-a</i>	to cultivate

Table 9: The structure of the verb root in Kiwoso

The basic phonological form of verbs in Kiwoso involves the combination of consonant, vowel and consonant (CVC), as the examples illustrated in table 9. Most of the complex verb stems are mainly extended form of the verbs. Verbs in Kiwoso can be extended by affixation of suffixes particularly the applicative, causative, stative and reciprocal. For example, when the basic root of the verb occurs with the stative, causative, and reciprocal suffixes, the verb acquires extended form with the form CVCVC, whereas the applicative suffix changes the simple CVC structure of verb into CVCV. However, there are other verbs that occur with longer roots but they are not derived forms (see table 9). Most of these verbs are lexicalized forms of extensions.

Apart from the canonical form of the verb root which is widely attested across Bantu languages, some primitive verb forms involve short roots with CV and VC structures. Bantu languages generally, have few cases of short roots. However, Kiwoso unlike several other Bantu languages, exhibits many short roots with different forms, as evidenced in table 10.

C roots	Gloss	CV roots	Gloss	VC roots	Gloss
<i>f-o</i>	die	<i>sa-a</i>	<i>remain</i>	<i>id-a</i>	enter/pass
<i>sh-a</i>	burn	<i>ma-a</i>	<i>finish</i>	<i>end-a</i>	go
<i>n-a</i>	drink	<i>ta-a</i>	<i>pay</i>	<i>or-a</i>	show
<i>w-a</i>	be/become	<i>na-a</i>	wither/wilt	<i>um-a</i>	parch
<i>ch-a</i>	come	<i>ka-a</i>	dwel/reside	<i>ur-a</i>	buy

Table 10: Short verb roots in Kiwoso

2.5.2.6 Verbal extensions

As mentioned in the previous sections, Bantu languages are characterized by a series of suffixes which, following Guthrie (1962), are generally referred to as extensions. These suffixes are referred to as extensions because they extend the semantic properties of the verb they are affixed to. In many Bantu languages, the extensions are characterized by the vowel harmony rule according to which the vowel of the extension assimilates to the vowel of the verb root. Kiwoso verbal extensions behave differently in that vowels of the extensions are invariable (i.e. the extensions are not influenced or affected by the vowel of the verb root). The most productive extensions are the applicative *-i-*, and the causative *-is-*. These extensions are also referred to as transitivity suffixes (see Rugemalira 1993). The extensions that can be considered as less productive in Kiwoso are passive and stative

suffixes. Rugemalira (1993) labelled these suffixes as detransitivizing suffixes. The extensions found in Kiwoso are as illustrated in table 11, with reference to examples.

Extension	Form	Example	Gloss
applicative	-i-	<i>many-i-a</i>	cut for/by/with
causative	-is-	<i>many-is-a</i>	make cut
stative	-ik-	<i>many-ik-a</i>	Be cuttable/become/get cut
passive	-o-	<i>many-o</i>	be cut
reversive	-u-	<i>shik-u-o</i>	uncover

Table 11: Verbal extensions in Kiwoso

Kiwoso lacks the reciprocal suffix, which has the form *-an-* in many Bantu languages. Reciprocalization in Kiwoso is expressed by the morpheme *-ku-*. This form is productively used to signify both reciprocalization and reflexivization in Kiwoso. Examples of reciprocal verbs in Kiwoso include *ikukoria* ‘to cook for one another’, *ikuakanyia* ‘to help each other’, and *ikuimbia* ‘to sing for one another’. However, there are lexicalized forms of the general reciprocal suffix in Bantu (*-an-*), such as *bakana* ‘fight each other’, *akana* ‘share with one another’ and *suwana* ‘hate each other’. As mentioned, the morpheme *-ku-* is also used for reflexivization in Kiwoso. The sentences in (42) demonstrate reflexive verb constructions.

- (42) a. *wandu walya wakuwaange wasomi*
wandu *wa-* *lya* *wa-* ***ku-*** *waang-e* *wa-somi*
 2-person 2AGRs-DEM 2AGRs-REFL-call- FV 2-elite
 ‘Those people call themselves elites’
- b. *muna nyakukabe*
mu-na *ni-* *a-* ***ku-*** *kab-e*
 1-child INIT-AGRs- REFL- hit-FV
 The child hits (by) himself/herself

It should also be noted that not all cases of reflexive take the morpheme *-ku-*. Reflexive forms in Kiwoso are also expressed by independent elements, as (43) demonstrates. The examples in (43) illustrate that the morpheme *-ku-* cannot co-occur with the verbs *samba* ‘wash’ and *lya* ‘eat’ as reflexive prefixes. Instead, reflexive occurs as independent pronoun, for example *muni* ‘herself/himself’, as in (43a), and *bheeni* ‘themselves’, as in (43b).

- (43) a. *muna nya(*ku)samba muni*
*mu-na ni- a- (*ku)- samb- a mu-ni*
 1-child INIT- 1AGRs-(*REFL)- wash-FV 1AGRs-self
 ‘The child washes (by) him/herself’
- b. *wana walya bheeni*
wa-na wa- ly- a bha-ini
 2-child 2AGRs-eat- FV2 2AGRs-self
 ‘Children eat (by) themselves’

2.4.2.6.1 Transitivity suffixes

The affixes of the verb that result in an increase in the number of argument in the predicate argument structure of the verb are referred to as transitivity affixes (Rugemalira 1993). Usually, these suffixes change the verb valency (i.e. the number of arguments a verb can co-occur with) by adding a new argument. For example, when suffixes such as the applicative and causative are affixed to an intransitive verb, they alter it into a monotransitive verb, and when affixed to a monotransitive, a ditransitive verb is derived. Transitivity suffixes in Kiwoso are further discussed in the following subsections.

2.5.2.6.1.1 The applicative suffix

The applicative morpheme in Kiwoso is realized by the suffix *-i-*. In many Bantu languages, the applicative suffix is associated with the vowel harmony rule (cf. Rugemalira 1993; 1995). However, the applicative suffix and some other verbal extensions in Kiwoso, are invariable. Similarly to other Bantu languages, the applicative suffix in Kiwoso adds an argument to the verb root to which it is applied. Normally, the DP argument introduced by the applicative suffix appears immediately after the verb. The argument introduced can bear a number of semantic roles, namely beneficiary (44b), instrument (45b), and locative/goal, as (46b) illustrate.

- (44) a. *wandu walekora kelya*
wa-ndu wa- le- kor- a kelya
 2-person 2AGRs-PST- cook-- FV 7food
 ‘People cooked food’

- b. *wandu walekorya bheenu kelya*
wa-ndu wa- le- kor- i- a bha-inu kelya
 2-person 2AGRs-PST- cook- APPL- FV 2-visitor 7food
 ‘People cooked visitors food (people cooked food for the visitors)’

- (45) a. *Leka nyalemanya n'ji*
Leka ni- a- le- many- a n'ji
 Leka INIT- AGRs- PST- cut- FV 3tree
 ‘Leka cut a tree’
- b. *Leka nyalemanyia kyaara n'ji*
Leka ni- a- le- many- i- a kyaara n'ji
 Leka INIT- AGRs- PST- cut- APPL- FV 7axe 3tree
 ‘Leka cut a tree by using axe/by means of axe’

- (46) a. *wana waledicha*
wa-na wa- le- dich- a
 2-child 2AGRs-PST- run- FV
 ‘The children ran’
- b. *wana waledichia nndasen*
wa-na wa- le- dich- i- a nndase-n
 2-child 2AGRs-PST- run- APPL- FV neighbor-LOC
 ‘The children ran to the neighbourhood’

The examples in (44b), (45b) and (46b) demonstrate the applicative suffix which introduces arguments with different semantic roles of the applied object⁷ in Kiwoso. While the object DP *bheenu* ‘visitors’ in (44b) bears the beneficiary role, the DP *kyaara* ‘axe’ in (45b) bears an instrumental role. The locative semantic role is expressed by the locative noun *nndasen* ‘neighbourhood’ which is

⁷ Another term used to refer to applicative suffix is ‘applied’ suffix (Marantz 1984) and the object introduced by the suffix is sometimes referred to as the ‘applied’ or ‘prepositional’ object (Hyman & Duranti 1982). Moreover, the derived verb is referred to as ‘applied verb’ (Bresnan & Moshi 1990). However, there is no theoretical significance of choosing, for example, the term applied suffix over the term applicative suffix. In this study, the applicative suffix and applicative morpheme are used interchangeably.

illustrated in (46b). The examples demonstrate that in Kiwoso, as generally in Bantu languages, the applicative suffix adds a new argument to the argument structure of a verb.

Depending on the semantics of the base verb, the applicative suffix in Kiwoso also introduces other semantic roles, namely maleficiary and motive roles, as exemplified in (47) and (48), respectively.

- (47) a. *waledoota kiti*
 wa- le- doot- a kiti
 3PL PST- break- FV 7chair
 ‘They broke the chair’
- b. *waledootia wana kidi*
 wa- le- doot- i- a wa-na kiti
 3PL PST- break- APPL FV7 2-child chair
 ‘They broke the chair for/on children’
- (48) (a) *walekumba umbe*
 wa- le- kumb- a umbe
 3PL PST- sell- FV7 9cow
 ‘They sold the cow’
- (b) *walekumbia umbe ukiwa*
 wa- le- kumb- i- a umbe ukiwa
 3PL PST- sell- APPL-FV7 9cow 14problem
 ‘They sold the cow because of the problem’

In (47b), the applicative suffix introduces the object DP argument *wana* ‘children’ which bears the maleficiary role, in the sense that the action was performed to their detriment. In (48b), the applicative suffix introduces the cause argument.

Generally, the applicative suffix can be viewed as a morpheme that introduces a new semantic arguments to the verb. The role of the applicative suffix in Kiwoso is also discussed in relation to change of location/position verbs (cf. chapter 6). It has been demonstrated that when change of location/position verbs co-occur with the applicative suffix, the suffix introduces a goal argument, and an exclusivity interpretation to the verb (cf. chapter 6, sections 6.3.5 and 6.6.4).

2.5.2.6.1.2 The causative suffix

The causative suffix is also an argument introducing morpheme. Similarly to the applicative, the causative changes the valency of the verb by adding a new internal argument in the predicate argument structure. In Kiwoso, the causative suffix has the form *-is-*. Depending on the semantics of the base verb, constructions with the causative suffix introduce arguments which bear different interpretations. The causative verb can be interpreted as causing, helping, or permitting/allowing someone to do something, as the examples in (49) demonstrate.

- (49) a. *wana walekora kelya*
wa-na wa- le- kor-a kelya
 2-child 2AGRs-PST- cook-FV 7food
 ‘Children cooked some food’
- b. *bheenu walekorisa wana kelya*
bha-inu wa- le- kor- is- a wa-na kelya
 2-visitor 2AGRs-PST- cook- CAUS-FV 2-child 7food
 ‘Visitors caused/make the children cook food’
- (50) a. *wana walebakia ikari*
wa-na wa- le- bak- i- a i-kari
 2-child 2AGRs-PST- board- APPL- FV 5-car
 ‘The children boarded into a car’
- b. *womi walebakisa wana ikari*
wo-mi wa- le- bak- is- a wa-na i-kari
 2-man 2AGRs-PST- board- CAUS-FV 2-man 5-car
 ‘Men helped children to board into a car’
- (51) a. *wana walekombi sukari*
wa-na wa- le- komb- a sukari
 2-child 2AGRs-PST- taste- FV 9sugar
 ‘Children tasted the sugar’

- b. *waka walekombisa wana sukari*
wa-ka wa- le- komb-is- a wa-na sukari
 2-woman 2AGRs-PST- taste-CAUS- FV 2-child 9sugar
 ‘Women allowed the children to taste the sugar’

The DP *bheenu* ‘visitors’ *womi* ‘men’, and *waka* ‘women’ in (49b), (50b) and (51b), respectively are the new arguments introduced by the causative suffix *-is-*. These arguments are mainly regarded as causers rather than agents. Within the Government and Binding (GB) theory (Chomsky 1981), two identical thematic roles are excluded to occur in a single clause, indicating that one sentence cannot contain two agent arguments. Thus the new DPs introduced by *-is-* cannot be interpreted as an agent, rather; they are causers. This is also subsumed under theta-criterion which states that each argument bears one and only one theta role, and each theta role is assigned to one and only one argument (Chomsky 1981:36). Notice that the argument DP *wana* ‘children’ in (49a), (50a) and (51a) are agent arguments, but in the morphological causative construction counterparts, they are semantically interpreted as the causee objects.

It has been pointed out in chapter 1 that the morphological causative morpheme *-is-* which occurs widely in Bantu languages is distinct from the semantic causative which form the focus of the present study. Similarly, the causative morpheme *-is-* discussed in this subsection is unrelated to the issues on the semantic causative explored in chapters 5 and 6 of this study.

2.5.2.6.2 Detransitivizing suffixes

It was pointed out in section 2.5.2.6, that a distinction is made between transitivity and detransitivizing extensions. In research on Bantu languages, the passive and stative extensions are generally characterized as detransitivizing suffixes. These two suffixes reduce the number of the verb’s arguments, in contrast to the applicative and causative suffixes, which increase the number of arguments in the predicate argument structure, thus viewed as transitivity suffixes. In Kiwoso, as is the case with many Bantu languages, passive and stative reduce the number of verbs’ arguments. The subsequent subsections are devoted to the discussion of passive and stative suffixes. (See also chapter 4 for a wider discussion of the two extensions by different scholars in different Bantu languages).

2.5.2.6.2.1 The passive suffix

Similarly to applicative, the passive suffix in Kiwoso appears in the form of a vowel. However, whereas applicative takes the vowel *-i-*, the passive is formed by *-o-*. The affixation of the passive suffix to the verb introduces an alternation of the actor and the non-actor roles, both syntactically and semantically, as exemplified in (52-53).

- (52) a. *wana walekora kelya*
wa-na wa- le- kor- a kelya
 2-child 2AGRs-PST- cook- FV 7food
 ‘Children cooked some food’
- b. *kelya kilekoro (na wana)*
kelya ki- le- kor- o (na wa-na)
 7food 7AGRs-PST- cook- PASS (by 2-child)
 ‘The food was cooked (by the children)’
- (53) a. *womi walebaara mbao*
wo-mi wa- le- baar-a mbao
 2-man 2AGRs-PST- chop-FV 10woods
 ‘Men chopped woods’
- b. *mbao tilebaaro na womi*
mbao ti- le- baar-o na wo-mi
 10wood 10AGRs-PST-chop-PASS by 2-man
 ‘Woods were chopped by men’

The examples in (52) and (53) demonstrate that the subject (the actor) *wana* ‘children’ in (52a) and *womi* ‘men’ in (53a) are demoted, in accordance with views of earlier research on passive, to the object position in a DP introduced by the preposition-like element, *na*-phrase, whereas the object (theme) (nonactor) *kelya* ‘food’ and *mbao* ‘wood’ are promoted to the subject position in the passive sentences, as evidenced in (53b) and (53b), respectively. Similarly to many other Bantu languages (cf. chapter 4), the passive suffix in Kiwoso suppresses the agent argument from the predicate argument structure of the verb, although it can be expressed in an oblique (prepositional) phrase, as the examples above demonstrate.

2.5.2.6.2.2 The stative suffix

The stative suffix in Kiwoso has the form *-ik-*. As pointed out above, the realization of the verbal extensions in Kiwoso often differ from other Bantu languages. This is also the case with the stative extension in that the vowel of the stative suffix is not affected by the vowel(s) of the verbal root. The general view from the previous research is that the passive reduces the number of arguments through demotion, while the stative reduces the number of the verb's arguments by deleting it completely from the argument structure (cf. chapter 4). The stative extension has referred to by different labels in previous research, for example neuter, neuter-passive, quasi-passive, neuter-stative, metastatic-potential, and descriptive passive (cf. Mchombo 1993). The present study adopts the label 'stative' because of its wider use. The examples of sentences with the stative suffix are illustrated in (54) and (55).

- (54) a. *wana walebaara shikombe*
wa-na wa- le- baar- a shi-kombe
 2-child 2AGRs-PST- break- FV 8-cup
 'Children broke the cups'
- b. *shikombe shilebarika*
shi-kombe shi- le- bar- ik- a
 8-cup 8AGRs-PST- break- STAT-FV
 'The cups broke'
- (55) a. *waka waledema nnda*
wa-ka wa- le- dem- a nnda
 2-woman 2AGRs-PST- cultivate-FV 3field
 'Women cultivated the field'
- b. *nnda uledemika*
nnda u- le- dem- ik- a
 3field 3AGRs-PST-cultivate-STAT-FV
 'The field got/became cultivated (the field was cultivatable)'

The above examples show that the agents (actors) *wana* 'children' in (54a) and *waka* 'women' in (55a) do not appear in (54b) and (55b) examples. This implies that the presence of the stative suffix *-ik-* prevents the appearance of the agent (actor) argument in the lexical semantic of the stative verbs.

Constructions with the stative suffix *-ik-* in Kiwoso are ambiguously interpreted as ‘stative’, as evidenced in (54b), ‘inchoative’ and/or ‘potential’, as (55b) demonstrates⁸

2.5.2.7 The final vowel (FV)

Generally, in Bantu languages, there is small closed class set of morphemes which occur in the final position of a verb. The most common morphemes are the vowels *-a*, *-e*, or *i* (cf. Nurse 2008). The vowel *-a-* has been labelled as final vowel (Good 2005), a default or indicative vowel (Nurse 2008; Bresnan & Mchombo 1987; Bresnan & Kanerva 1989; Deen 2005), or verbalizer (Mchombo 1978). On the other hand, *-e* and *-i* occur as final vowels in the subjunctives (Nurse 2008). Notice that whereas the final vowel *-a* is considered the default form, the *-e* and *-i* morphemes are considered as the marked forms across Bantu languages. However, Nurse (2008) observes that in some languages other morphemes and categories may occur in the post-final position. He postulates that in most cases, these morphemes denote location, aspect, tense and focus. Kiwoso is one of the few Bantu languages with post-final morphemes in its verbal structure. The morphemes and categories that can occupy post-final position in Kiwoso are the negative and the tense morphemes.

As in many Bantu languages, the final vowel in Kiwoso is *-a-* except in the plural imperative and subjunctive verb constructions, as illustrated in (56) and (57), respectively.

- (56) a. *wana wasome*
 wa-na *wa-* *som-* *e*
 2-child 2AGRs-read- FV
 ‘Children must read’

- b. *wana wadiche*
 wa-na *wa-* *dich-* *e*
 2-child 2AGRs-run- FV
 ‘Children must run’

- (57) a. *waka wakore kelya*
 wa-ka *wa-* *kor-* *e* *kelya*
 2-woman 2AGRs-cook-FV 7food
 ‘Women should cook food’

⁸See also chapter 4 for similar observations from other Bantu languages.

- b. *wana walale kitaren*
wa-na wa- la- e ki-tare-n
 2-child 2AGRs-sleep-FV 7-bed-LOC
 ‘Children should sleep on the bed’

The examples in (56) and (57) illustrate that the final vowel of the verbs is *-e*. The sentences in (56) express a command, whereas in (57) express a condition. The suffix vowel *-o* also appears in the final position of the verb in Kiwoso passive constructions (see section 2.5.2.6.1).

2.5.2.8 Negative morphemes

In Kiwoso, negation is expressed by the morpheme *-n*. It appears after the final vowel, as the examples in (58) demonstrate.

- (58) a. *waka walekoran*
wa-ka wa- le- kor- a- n
 2-woman 2AGRs-PST- cook- FV- NEG
 ‘Women did not cook’
- b. *wandu walechan*
wandu wa le ch- a- n
 2-person 2AGRs-PST- come- FV-NEG
 ‘People did not come’

However, in relative clauses, the morpheme *-la-* occurs immediately after the subject prefix, but before tense/mood affixes, as exemplified in (59).

- (59) a. *wana walaakoraa*
wa-na wa- la- a- kor- a- a
 2-child 2AGRs-NEG- PRES- cook- -FV PROG
 ‘Children who are not cooking’
- b. *waka walaasekaa*
wa-ka wa- la- a- sek- a- a
 2-woman 2AGRs-NEG-PRES- laugh- -FV PROG
 ‘Women who are not laughing’

In subjunctive constructions, the two forms of negative morphemes, that is, the suffix *-n* and *-la-* co-occur, as demonstrated in (60).

- (60) a. *wana walakoren*
 wa-na *wa-* *la-* *kor-* *e-* *n*
 2-child 2AGRs-NEG- cook- FV- NEG
 ‘Children should not cook’
- b. *wandu waleenden*
 wa-ndu *wa-* *la-* *end-* *e-* *n*
 2-child 2AGRs-NEG- go- FV- NEG
 ‘People should not go/leave’

The examples in (60) demonstrate that the general negative morpheme *-n*, and the negative morpheme *-la-* associated with the imperatives have a specific position in the verbal domain as they do not appear in any other context.

2.6 The verbal argument structure

Theoretical studies conducted on semantic (thematic) roles in syntax, particularly on the predicate argument structure of verbs generally hold that, verbs display a variety of different argument structures (cf. Baker 1988; Grimshaw 1990; Keyser & Hale 1993; Pesetsky 1995, Ramchand 1997, among others). These studies explore issues relating to how the lexical semantics of a verb determines its argument realization. The present study examines, in particular, the properties of change of state and change of location/position verbs in relation to the realization of arguments in Kiwoso.

Studies on predicate argument structure generally state that, in order to determine the relationship between arguments and the syntactic positions they occupy, semantic verb class distinctions need to be made since the argument-selecting behaviour of verbs is different, and verbs have different selectional restrictions (cf. Pustejovsky 1995; Rappaport Hovav & Levin 1998; Siddiqi 2009). Pustejovsky (1995:63-64) in particular identifies four different types of arguments for lexical items relevant to the study of argument realization: (i) true arguments, (ii) default arguments, (iii) shadow arguments, and (iv) true adjunct arguments. The four categories are exemplified below in Kiwoso sentences.

(i) **True arguments:** According to Pustejovsky (1995), these are arguments that are necessarily expressed in syntax and they concern the domain which is in essence covered by the theta-criterion. Pustejovsky argues that verbal alternations such as the causative and anticausative alternation involves the expression of true arguments. True arguments in Kiwoso are exemplified in (61).

- (61) a. *wana walebaara kikombe*
 wana *wa-* *le-* *baar-* *a* *kikombe*
 2-child 2AGRs-PST- break- FV 7cup
 ‘The children broke the cup’
- b. *kikombe kilebarika*
 kikombe *ki-* *le-* *bar-* *ik-* *a*
 7cup 7AGRs-PST-break- STAT- FV
 ‘The cup got/became broken’

In (61), the DPs *wana* ‘children’ and *kikombe* ‘cup’ are considered true arguments in the sense that they cannot be omitted, thus they are syntactically and semantically significant in these constructions as opposed to the default arguments illustrated in (62).

(ii) **Default arguments:** These are arguments that are only necessary for the logical well-formedness of the construction (Pustejovsky 1995). They are not obligatory in the surface syntactic expression. The examples in (62) demonstrate the occurrence of default arguments in Kiwoso.

- (62) a. *wandu waletana mmba na mbao*
 wa-ndu *wa-* *le-* *tan-* *a* *mmba na mbao*
 2-person 2AGRs-PST-build- FV 9house by 10wood
 ‘People built the house by (the use of/out of) woods’
- b. *wandu walaala mmba na madawa*
 wa-ndu *wa-* *le-* *al-* *a* *mmba na madawa*
 2-person 2AGRs-PST- thatch- FV 9house by 6grasses
 ‘People thatch the house out of grasses’

The nouns *mbao* ‘woods’ and *madawa* ‘grasses’ in the examples given above are instances of default arguments that may be omitted in the syntactical representations without rendering the sentence ungrammatical.

(iii) **Shadow arguments:** These are the arguments that express the semantic content incorporated in certain verbs, but optionally expressed in the syntax. However, Pustejovsky (1995) points out that the shadow arguments can only be expressed syntactically when expressed arguments stand in a subtyping relation to the shadow arguments. Such arguments are very common in Kiwoso, as the case in (63) demonstrates.

- (63) a. *Lelo nyaleranda mbao (*neeranda)*
*Lelo ni- a- le- rand- a mbao (*na iranda)*
 Lelo INIT- AGRs-PST- saw- FV 10wood (*by saw)
 Lelo saw the woods (*by means of a saw)’
- b. *Lelo nyaleranda mbao neeranda lyipya*
Lelo ni- a- le- rand- a mbao (na iranda lyi-pya)
 Lelo INIT- AGRs-PST- saw- FV 10wood (with 5saw 5AGR-new)
 ‘Lelo saw the woods with a new saw’

The examples in (63) demonstrate that its inherent lexical semantics of the verb *randa* ‘saw’ in Kiwoso subcategorizes for the type of instrument involved in the performance of the event described by such a verb, thus the instrument argument *iranda* ‘saw’ occurs as a shadow arguments as described by Pustejovsky (1995). Shadow arguments are syntactically unexpressed as the ungrammaticality of the instrument *iranda* illustrates in (57a). However, these arguments may be expressed under certain circumstances, particularly when they need to be specified or qualified, as (63b) exemplifies.

(iv) **True adjunct:** These are qualificative expressions which are necessary for situational interpretations, but they are not linked to the lexical semantic interpretation of verbs. The true adjunct expressions involve temporal and spatial or locative modifications. These expressions are exemplified in (64).

- (64) a. *waka walekora kelya (ko masaa)/(masaa)*
waka wa- le- kor- a kelya (ko masaa)/(masaa)
 2-woman 2AGRs-PST- cook- FV 7food (for hours)/(hours)
 ‘Women cooked food (for hours) / (in hours)’
- b. *waka walekora kelya rukon*
waka wa le kor a kelya ruko- n
 2-woman 2AGRs-PST- cook- FV 7food kitchen-LOC
 ‘Women cooked food in the kitchen/in the fire place’

In sentence (64a), *ko masaa/masaa* ‘forhours/in hours’ occurs as a temporal adjunct, whereas *rukon* ‘in the kitchen/fireplace’ in (64b) occurs as locative adjunct.

2.6.1 Argument selectional restrictions

Semantic restrictions on arguments are some of the specifications that verbs specify in terms of the lexical semantic features. The selectional restrictions, therefore, specify the type and the number of arguments a verb can express, which are basically determined by the meaning of a verb. Baker (1979) argues that the lexical entry of every verb specifies the argument structure permitted in the form of subcategorization frames. However, selectional restrictions on arguments are mainly language specific. For example, the verb *kama* ‘milk’ in Kiwoso selects two arguments, as illustrated in (65), where the object argument is a cognate noun of the verb meaning.

- (65) a. *waka walekama malela*
wa-ka wa- le- kam- a malela
 2-woman 2AGRs-PST- milk- FV milk
 ‘Women milked the milk’
- b. *(waka)/(*upepo) (wa)/(lu)lesaka (umbi)/(*mawee)*
*(wa-ka)/(*upepo) (wa)/(lu)- le sak a (umbi)/(*mawee)*
 (2-woman)/(9wind) (2)/(9)AGRs- PST-grind- FV (9millet)/(6stones)
 ‘(Women)/(*wind) ground (millet)/(*stones)’

In (65), the DP *waka* ‘women’ is the agent of an action, whereas the DP *malela* ‘milk’ is a theme argument. A sentence with the verb *kama* is ungrammatical in Kiwoso without the two arguments. It is impermissible, for example, to have a sentence like *waka walekama* ‘women milked’. Apart from

the fact that a verb constraints the number of arguments it may have, it also selects the semantic features of such arguments, as (65b) demonstrates. Generally, this study has established that verbs such as *saka* ‘grind’, *manya* ‘cut’, and *kora* ‘cook’ cannot co-occur with non-human arguments as agents of the events denoted by these verbs. Therefore, the selected arguments in (65b) and their semantic features are part of verbs’ lexical semantic information.

2.6.2 Linking arguments to the syntactic structure

Dowty (1986) points out that the number of arguments a verb selects is determined by its lexical semantic representation. Therefore, the predicate argument structure of a verb may be identified as a one-place predicate, two-place predicate or three-place predicate, which relates to a verb with one, two, or three arguments, respectively. Each argument is associated with a certain syntactic relation which then corresponds to a specific semantic role. The subcategorization frames in Kiwoso are illustrated in table 12.

Verb valency	Example	Gloss	Syntactic relations	Thematic roles
one-place predicate	<i>seka</i>	laugh	subj	agent
two-place predicate	<i>lya</i>	eat	subj + direct object	agent + theme
three-place predicate	<i>bhika</i>	put	subj + direct object+ location	agent +theme +locative

Table 12: Verbs subcategorization frames in Kiwoso

The relationship between arguments, their syntactic and thematic roles has been illustrated in table 12. The sentences in (66) exemplify three-place predicates in Kiwoso.

- (66) a. *wana walebhika shitabu sandun*
wana wa- le- bhik- a shitabu sandu- n
 2-child 2AGRs-PST- put- FV 8books box- LOC
 ‘Children put the books in the box’
- b. *waka waleininga wana meembe*
waka wa- le- ining- a wa-na meembe
 2woman 2AGRs-PST- give- FV 2-child 6mangoes
 ‘Women gave the children (some) mangoes/avocados’

The verbs *bhika* ‘put’ and *ininga* ‘give’ select three arguments. The subjects *wana* ‘children’ (66a) and *waka* ‘women’ (66b) correspond to the agent roles, the direct object *shitabu* ‘books’ in (66a) is the theme, and *wana* ‘children’ in (66b) bears the patient thematic role. *Meembe* ‘avocados/mangoes’ is the indirect object which is the theme argument. In (66a), *sandun* ‘in the box’ is a locative which bears the location thematic role. The three arguments in both sentences are obligatory participants in the syntactic representation of the verb *bhika* ‘put’ and *ininga* ‘give’ in Kiwoso, as is also the case in many languages.

2.7 Pronominal categories

Kiwoso distinguishes three singular pronouns and its three plural counterparts. These pronouns denote human entities, as illustrated in table 13 with the subject and object agreement prefixes, respectively.

Person	Pronouns		AGRs	AGRo
1SG	<i>nni</i>	I	<i>ngi-</i>	<i>ngi-</i>
2SG	<i>ewe</i>	you	<i>ku-</i>	<i>ku-</i>
3SG	<i>iwe</i>	s/he	<i>a-</i>	<i>n-</i>
1PL	<i>esi</i>	we	<i>lu-</i>	<i>lu-</i>
2PL	<i>eni</i>	you	<i>mu-</i>	<i>mu-</i>
3PL	<i>iwo</i>	they	<i>wa-</i>	<i>wa-</i>

Table 13: Kiwoso person pronouns

In Kiwoso, gender conflict is resolved by employing a plural form of the person pronouns, as examples in (67-69) demonstrate.

(67) *nni neewe luleura nyanyi kinaange ukou*

nni na ewe lu- le- ur- a nyanyi kinaange ukou

1SG and 2SG 1PL- PST- buy- FV 10vegetable market yesterday

‘I and you (we) bought vegetables in the market yesterday’

(68) *ewe nawo mledema nnda*

ewe na iwo m- le- dem- a nnda

2SG and 3PL 2PL- PST- cultivate- FV 3field

‘You and they (you) cultivated the field’

(69) *nni neeni **lu**ukora kelya*

*nni na eni **lu**- u- kor- a kelya*

ISG and 2PL 1PL- FTR- cook- FV food

‘I and you (we) shall cook the food’

2.8 Summary

This chapter provided an outline descriptive grammar of Kiwoso, the language under study. It has presented the status of the language in terms of use and a general overview of the speakers of this language. The phonological system of the language was briefly discussed. It has been demonstrated that Kiwoso has ten vowels, which are subdivided into five short and five long vowels. It was pointed out that the vowel length in this language is contrastive, in the sense that vowel length is phonemic, thus semantically significant (see table 1). On the other hand, Kiwoso exhibits 20 consonants and 2 semi-vowels. It has been evidenced that apart from 20 prototypical consonants and the 2 semi-vowels, Kiwoso is also characterized by prenasalized consonants, namely [nd], [mb], and [ng]. As is typical in Bantu language, Kiwoso is characterized by a system of noun classes, as the discussion in section 2.4.1 demonstrates. It has been stated that, like other Bantu languages, Kiwoso exhibits agglutinating verbal morphology in that several morphemes can be affixed to a single verbal root. The morphemes that co-occur with the verbal roots include verbal extensions, which determine the features of verbs in terms of transitivity. For example, extensions such as the causative and applicative introduce an argument to the predicate argument structure of the verb root, whereas passive and stative suffixes appear to reduce one argument from the predicate argument structure. This suggests that apart from lexical semantic properties of individual verbs, other elements including verbal extensions affect transitivity properties of the root. This chapter has also discussed in brief the predicate argument structure and some issues related to selectional constraints of the predicate arguments of the verbs in Kiwoso.

CHAPTER 4

PERSPECTIVES ON ARGUMENT REALIZATION FROM PREVIOUS RESEARCH IN GENERATIVE SYNTAX

3.1 Introduction

This chapter presents an overview of previous approaches to argument realization in generative syntax with particular focus on the verbs of change of state. It explores various theoretical perspectives employed in the study of the argument structure of verbs including thematic role and event structure approaches. In addition, this chapter discusses previous studies conducted on argument alternations, particularly on the transitive (causative) and intransitive (anticausative/inchoative) alternations. With regard to the anticausative alternation, special attention is paid to current debates on the nature of causation. Three competing approaches of (anti-)causative alternations, namely the transitivization, and detransitivization approaches, and the most current view, the syntactic decomposition approaches, are discussed in this chapter.

This chapter is divided into eight different sections. Section 3.2 deals with the theoretical background of argument realization, and 3.3 focuses on the general overview on the studies of (anti-)causative alternations and the approaches to anticausative alternations including transitive and intransitive based, and the syntactic decomposition approaches. Section 3.4 discusses the notion of Distribution Morphology (DM), and 3.5 provides an overview of external arguments. The distinctions between anticausative, passive, and middle verb constructions are discussed in section 3.6. Section 3.7 reviews aspectual verb class semantics, and section 3.8 summarizes and provides the conclusion of the research reviewed in the chapter. The reason that the present study characterizes argument realization, causation and event semantics of change of state and change of location/position verbs in Kiwoso, a review of the theoretical background of argument realization is pertinent as it facilitates an understanding of the gaps to be filled through this study. This subtheme is what is discussed in the section below.

3.2 Theoretical background on argument realization

Previous studies on the syntax and lexical semantic interface in generative syntax assume that the syntactic realization of arguments is determined by the lexical properties of a verb. This assumption is clearly advocated in the Government and Binding (GB) frameworks, as postulated in the Projection Principle (Chomsky 1981). In terms of the Projection Principle, the lexical meaning of a verb is

regarded as the determinant factor of its syntactic behaviour. Therefore, scholars have devoted much effort in formulating linking rules that determine the syntactic realization of the arguments.

The general approaches postulated in the formulation of linking rules is the thematic roles approach, known as the case frame (Fillmore 1968) and the theta-grid (Stowell 1981) approaches within the GB theory. The semantic roles approach was first introduced in Fillmore's (1968) pioneer work 'the case for case' which advances the proposal that the proposition of a sentence can be presented as a cluster of words consisting of a verb and a number of noun phrases with specific marked thematic roles namely, an agent, patient, instrument and goal. Fillmore argued that the labels (which are the agent, patient, instrument and goal) identify the grammatically relevant aspects of the roles related to the syntactic realization of an argument. Thus, he proposed that a verb is defined in accordance with the semantic roles it takes, that is to say, its case frame. According to this proposition, the verb *cook*, for example, takes 'an agent' and 'theme' whereas *enter* takes 'an agent' and 'goal'.

Earlier thematic role theories to argument realization assume that thematic roles such as agent, patient and instrument are linked to a specific argument realization option in a predictable fashion through mapping rules (Gruber 1965; Hall 1965; Fillmore 1968; Jackendoff 1972). Particularly, Fillmore proposes rule in (70) which is intended to account for the examples in (71).

(70) If there is an A [Agent], it becomes the subject; otherwise, if there is an [Instrumental], it becomes the subject. Otherwise, if there is an absence of the above, the subject is O [Objective] (Fillmore 1968:33).

- (71) a. Jane broke the door with the hammer
 b. The hammer broke the door
 c. The door broke

In (71a) above, Jane is an *agent* and is directly linked to the grammatical subject; the door is the *patient*, mapped to the direct object. The hammer is an *instrument* linked to an oblique of the preposition *with*. In (71b), the agent is absent, the hammer is an instrument that occupies the subject position. In (71c), both *agent* and *instrument* are missing. Subject position is occupied by the *patient* – 'the door'.

The examples in (71) illustrate that the subject position can be occupied by different thematic roles such as, agents, instruments and objective (patient), hence it is not restricted to an agent, as is

traditionally assumed. This view relates well with one of the objectives of the present study, which is to explore the properties of change of state and change of location/position verbs in relation to external argument realization in different argument alternation constructions like anticausative, passive and middle sentences.

Fillmore (1968) assumes that relevant grammatical aspects of arguments can adequately be expressed by a relatively small inventory of thematic roles. He postulates that a small number of universal linking rules can offer various ways in which semantic arguments can be expressed in the surface form of an utterance (cf. example (71)).

Assuming the principle of biuniqueness which requires that only one role is assigned to a single argument, Fillmore notes that a single case may be realized by various constituents, but the relationship of each case occurs only once in a simple sentence, as exemplified in (72).

- (72) a. Joan broke the pot
 b. A stone broke the pot
 c. Joan broke the pot with a stone
 d. *Joan and a stone broke the pot
 e. *A stone broke the pot with a stick

The sentences in (72) exhibit different types of subjects, namely an agent subject in (72a) and (72c), and an Instrument subject in (72b). Sentence (72d) is ungrammatical as it assigns both Agent and Instrument, two different thematic roles, to a single argument which is against the principle of biuniqueness. Unlike (72c), (72e) is ungrammatical because the instrument role (*stone* and *stick*) is assigned to two syntactically dependent elements. In (72c), an agent and instrument appear in the same sentence, but it is the agent rather than the instrument that appears as the subject of the sentence.

Generally, the fundamental assumption of most lexicalist approaches to argument realization is that argument structure is directly determined by the properties of a verb. Therefore, the lexical entry of a verb directly determines the syntactic property and hence argument realization. The present study assumes a non-lexicalist perspective with regard to syntactic approaches to argument realization, focusing on change of state and change of location/position verbs in a Bantu language, Kiwoso.

Different, though, related hypotheses have been proposed in relation to the thematic roles approach. The proponents of these propositions contend that thematic roles are universal phenomena that can

be expressed in any natural language. To take as an example, Perlmutter and Postal (1984) propose alignment hypothesis as presented in (73) below.

(73) **Universal Alignment Hypothesis (UAH)**

The UAH posits that there exists principles of Universal Grammar (UG) which predict the initial (grammatical) relation borne by each nominal in a given clause from the meaning of the clause (Perlmutter & Postal, 1984:97). This hypothesis is not restricted to individual predicates; instead, it applies to UG. Therefore, semantic roles under this hypothesis can be viewed as establishing a direct mapping from verb classes to their appropriate arguments. On the other hand, (Baker 1988) argues that the mapping between thematic roles and the syntactic position is determined by the meaning of individual verbs and the linking process is actually universal. The hypothesis is as presented in (74).

(74) **Uniformity of Theta-Assignment Hypothesis (UTAH)**

Identical thematic relationships between items are represented by identical structural relationships between those items at the level of Deep Structure (DS) (Baker 1988:46). In addition to the thematic role linking rules, Jackendoff (1972) proposed the thematic role hierarchy in relation to the UTAH principle in which thematic roles are ranked in relation to one another. According to the thematic hierarchies, thematic roles are arranged in an abstract ‘prominence’ hierarchy, and the syntactic realization of arguments is based on the position of roles in this hierarchy. The highest role in the thematic hierarchy is assigned the highest argument in the syntactic structure (i.e. the subject), the following role in the hierarchy is assigned the next highest argument and the trend goes on. These roles are regarded as independent and non-simplified components of grammar. The notion of a universal thematic hierarchy relevant to linking has reappeared in various works including Jackendoff (1972, 1990), Foley and Van Valin (1984), Givón (1984), Alsina and Mchombo (1989), and Van Valin (1993). Some instances of thematic role hierarchy are presented in (75) and (76).

(75) Agent > Dative/Benefactive > Patient > locative > Instrument > Associative > Manner
(Givón 1984)

(76) Agent > Beneficiary > Recipient/Experiencer > Instrument > Theme/Patient > Locative
(Bresnan & Kanerva 1989)

Verbs which describe psychological state, recognized as psych verbs, challenge the validity of theories of argument structure based on thematic hierarchies. Such verbs typically take two roles, namely Experiencer and Theme. The assignment of these roles in the thematic hierarchy violates any possible ordering, as (77) illustrates.

- (77) a. Jane's illness shocked the doctor
b. The doctor was shocked about Jane's illness

The Experiencer (*the doctor*) in (77a) appears in the object position, while in (77b) it occurs in the subject position. This apparently violates the UTAH. Belletti and Rizzi (1988) claim that the underlying structures of psych verbs constructions such as those exemplified in (77) are the same. However, Pesetsky (1995) refutes such analysis, calling into question the validity of thematic hierarchies. Apart from the challenges evidenced regarding psych verbs constructions, the ordering of roles in thematic hierarchy is still debatable. Despite a consensus on agent as the most prominent role, little agreement has been reached regarding other semantic roles. In fact, the current inventory of semantic roles, their semantic contents and diagnostics are a pending problem in generative research. Therefore, this area requires further investigation. The present study on Kiwoso assumes a non-lexicalist syntactic decomposition approach to argument realization with focus on change of state and change of location/position verbs in this language. The approach adopted for the present study assumes that argument realization is compositionally determined in the syntax, thus bringing a new dimension to this area.

Levin and Rappaport Hovav (2005) point out that issues concerning argument realization cannot be accounted for by the simple assumed notions of agent-subject, patient-object relationship taken by most thematic role approaches. They suggest that theories of lexical semantic representation and argument realization be designed in such a way that the patterns of variation and uniformity in argument realization are accommodated. Indeed, neither the semantic role list approaches nor the hierarchical assumptions on thematic roles have addressed argument realization concerns adequately. This observation calls for the present study to address the issue of argument realization in a different perspective.

Semantic role mapping rules (linking rule) has never been the solution to the challenges associated with thematic role approaches. Fillmore (1968) and his followers in his work (Case Grammar) assume that one argument should be assigned one and only one thematic role. It has been noted that this

assumption does not work in all verb types. Scholars such as Gruber (1965) and Jackendoff (1972) have presented evidence against such assumption using motion verbs and verbs of transfer of possession where a single DP bears two semantic roles and their assertion, as taken from Levin and Rappaport Hovav (2005:44), is illustrated in (78).

- (78) a. Phil sold the yacht to Mira
b. Mira bought the yacht from Phil

Levin and Rappaport Hovav argue that in (78), *Phil* is the source, *Mira* the goal and the *yacht* the theme argument, in both cases. Moreover, *Phil* and *Mira* are agents in (78a) and (78b), respectively. Therefore, *Phil* is both an agent and a source, whereas *Mira* is an agent as well as a goal. These examples demonstrate that it is possible for a single noun or noun phrase to bear more than one thematic role, contrary to the view of Fillmore (1968) and other lexicalist assumptions of linking rules.

Lin (2004) asserts that thematic role theories cannot adequately address issues concerning argument structure because thematic roles do not have one to one relationships between the meaning of the verbs and the event they denote. Therefore, issues concerning argument realization should be addressed by other lexical semantic approaches such as event structure. This assertion is in line with Levin and Rappaport Hovav (2005) view that various lexical semantic representations are derived largely from the properties of the events described by the given verbs. These scholars propose that a theory of the semantic determinant of argument realization should be formulated on the basis of event conceptualization. In addition to the syntactic decomposition perspectives, the present study has adopted an event structure perspective in accounting for argument realization and causation in Kiwoso.

3.2.1 Lexical entailment-based theories and proto-roles (Dowty 1989, 1991)

Lexical entailment-based approaches such as Dowty's (1991) proto-roles approach constitutes one of the attempts to address the problems concerning thematic hierarchies. Dowty postulates that agent and patient are the only two semantic roles relevant for argument realization. He argues that the two roles are prototypes in the sense that each lexical entailment is as significant as others, and there is no entailment regarded to be higher than others. In other words, there is no precedence relationship between the properties. Invoking his earlier views (Dowty 1989), this scholar advances two thematic proto-roles, namely the agent and patient proto-roles. The two roles, with their accompanying properties, are presented in (79) and (80).

- (79) **Dowty's agent proto-roles** (Dowty (1991:572, (27))
- i. volitional involvement in the event or state
 - ii. sentience (and/or) perception
 - iii. causing an event or change of state in another participant
 - iv. movement (relative to the position of another participant)
 - v. (exists independently of the event named by the verb)
- (80) **Dowty's patient proto-roles** (Dowty (1991:572, (28))
- i. undergoes change of state
 - ii. incremental theme
 - iii. causally affected by another participant
 - iv. stationary relative to movement of another participant
 - v. (does not exist independently of the event, or not at all)

Dowty's proto-roles approach seems convincing in terms of empirical coverage. The accompanying properties of the proto-agent and the proto-patient capture important generalizations about argument realization. However, the challenge is to explain the source of the lexical entailments proposed if it is to avoid being regarded merely as a descriptive approach.

Furthermore, Dowty's approach is limited in scope in that it focuses on the analysis of basic transitive verbs with a grammatical subject and object. The approach ignores the analysis of structures that result from different morphosyntactic rules that alter the valence, voice or grammatical relations such as (anti-)causative alternation and middle verb constructions. The system does not address, and cannot accommodate, two or three argument verbs with an oblique participant, as also evidenced by Primus (1999), Davis and Koenig (2000) and Davis (2001). Dowty has attempted to distinguish between unaccusative and unergative verbs but there is limited information about intransitive verbs in his approach.

Dowty's approach has furthermore dealt exclusively with the English language phenomena and no attempt was given to other languages with rich morphosyntax (like the Bantu languages, for example) which raise several challenges in regard to argument realization. In this regard, similarly to lexicalist approaches, Dowty's proto-role approach offers a partial solution to the problem of argument realization.

Scholars have noted that Dowty's proto-role is conceptually problematic (Primus 1999). Dowty's lexical entailments that constitute the proto-agent and proto-patient are not independent of one another. Most features that characterize the proto-agent seem to characterize proto-patient as well. For example, the proto-agent lexical entailment of *causation* and that of proto-patient, *undergoing a change of state and being causally affected* appear to be the same thing. Another problem is the lexical entailments *movement* of the proto-agent and that of proto-patient *stationery relative to another participant* are closely related in the sense that both entailments involve motion properties.

Besides the wide coverage of Dowty's proto-role, the characterization of the agent proto-role and patient proto-role is debatable, similarly to the list of semantic roles and their associated definitions (see section 3.2). Like the semantic role list approaches, Dowty's proto-roles have been subject to refinement and the sets of agent proto-role and patient proto-role entailments have been extended differently by various scholars (see Ackerman & Moore 1999, 2001). For example, Dowty's patient proto-role entailment '*incremental theme*' has been the most problematic and has received much attention in research, as did the distinction and the content of the semantic role *patient* versus. *theme*. The patient proto-role entailment *incremental theme* is limited as a predicator of argument realization which prompted Ackerman and Moore (2001), invoking aspectual properties, to propose the additional entailment '*bounding entity*' known as '*telic entity*'. Although the two sets of entailments of patient proto-roles, '*bounding entity*' and '*telic entity*' from these scholars are similar in terms of aspectual properties, they differ in that each identifies a slightly different set of arguments. This problem has, in part, informed the present study to adopt a syntactic decomposition approach in combination with aspectual verb classes in accounting for argument realization and causation in Kiwoso.

Similarly to earlier thematic role approaches, generalized semantic role approaches, like Dowty's proto-role approach, suffers several drawbacks as pointed out in this section. However, unlike thematic role list approaches, Dowty's proto-role approach has been impressive in terms of coverage. The wide coverage of Dowty's approach is due to the fact that many of the proto-role entailments are grounded in the notions that figure in causal and aspectual approaches, the two major perspectives of event conceptualization. Agent and patient proto-roles constitute entailments relevant to both causal and aspectual approaches.

3.2.2 Predicate decomposition

Apart from Dowty's proto-roles approach, a number of other theories of lexical semantic representations, such as predicate decompositions, have been postulated to address the flaws of

theories invoking semantic roles (cf. Carter 1976; Jackendoff 1983; Pinker 1989; Parsons 1990; Pustejovsky 1991, among others). As pointed out above, the predicate decompositions approach is among the theories advanced to fill the gaps that the Dowty proto-roles theory does not answer. Predicate decomposition is defined as a representation of meaning formulated in terms of one or more primitive predicates chosen to represent components of meaning that recur across significant sets of verbs (Levin & Rappaport Hovav 2005:69). For example, a primitive predicate CAUSE is often taken to be the core element to the predicate decompositions of all lexically causative verbs such as *break*, *open*, and *dry*.

In predicate decomposition, the representation of a verb meaning is linked to one or more of the verb's grammatically relevant elements of meaning. Levin and Rappaport Hovav (2005) assert that such kind of representation is often referred to as event structure because linguistically, it represents a relevant event type. They argue that the lexical semantic representation of verbs in terms of predicate decompositions (which is event structures) consists of two properties that make them distinct from thematic role theories. On the one hand, event structures distinguish simple from complex events in their entailments, a distinction which has implication in the argument realization. On the other hand, event structures differentiate the core meaning of a verb (i.e. the root) from the components of meaning that identify the event type of the verb (i.e. ACT/DO, CAUSE, BECOME, BE). The major assumption is that argument structure theories organized in terms of abstract primitives as suggested in most predicate decomposition approaches, would result in a more solid grounded theory with adequate explanatory and predicate power. The following subsections present views from different scholars on predicate decomposition approaches that are relevant to the present study.

3.1.2.1 Carter (1976)

Carter's (1976) is one of the earliest studies to represent verb decomposition in terms of primitives. Carter postulates that notions such as causation (CAUSE), stativity (BE), and inchoativity (CHANGE) are represented via primitives, as demonstrated in (81).

(81) Darken: x CAUSE (y BE DARK) CHANGE)

According to Carter, the paraphrase of the above representation is '*cause to change into a state of being dark*'. CAUSE, BE, and CHANGE are the three primary primitives identified by him which have been adopted in most studies, though with different labels. For example, the primitive predicate CHANGE does not seem to be adopted by that label; instead, it has been interpreted as a *result state*

which is assumed to be constant. In other words, Carter's representation can be interpreted as: x CAUSE ((y BECOME) STATE).

3.1.2.2 Foley and Van Valin (1984)

Foley and van Valin note that the characterization of predicates and the semantic relations which obtain between them and their arguments is one of the fundamental problems in the analysis of clause structure. Thus, these scholars developed a system for capturing the semantic role structure of the clause based on the contrastive notions of *actor* and *undergoer*, on the one hand, and in terms of lexical decomposition of predicates and operators, on the other. They argue that *actor* and *undergoer* are the two arguments of a clause, despite not being identical to the syntactic relations like subject and object, or the Fillmorean Agent and Patient case roles. Foley and van Valin's system of lexical decomposition which is of interest in this section is based on Dowty's (1979) verb classification, as developed from Vendler (1967). Foley and van Valin point out that the system of predicate decomposition provides the basis for an account of thematic relations that exist between a predicate and its arguments. Therefore, relations such as Agent, Patient, Theme or Locative are not independently existing primitive relations which are derived arbitrarily from verbs. Instead, they are relations which are derived from the semantic structure of predicates themselves.

In predicate decomposition approaches, the meaning of a verb is considered to have two components; the first one is an event template that reflects the subevent structure of the event, and the second component is an idiosyncratic root associated with a specific verb that determines the specific type of event reflected by the event template. Roots cover either the manner of the event or the particular result state of the event. Manner or result state of the event is the types of idiosyncratic meaning. This idea can be exemplified with reference to examples provided by Rappaport Hovav and Levin (1998:119, 126) in (82).

- (82) a. the flower blossomed
[BECOME x < IN –BLOSSOM>]
- b. Phil swept the floor
[x ACT <sweep> y]
- c. Phil swept the floor clean
[[x ACT < sweep > y] CAUSE [BECOME y < CLEAN >]]

In example (82), each sentence consists of different event template. The event template in (82a) contains BECOME predicate showing that *y* changes its state as a result of event (i.e. becoming blossomed for the verb *blossom*). This is an instance of lexical semantic representation of verbs of state. In (82b), the ACT event exhibits two participants, *x* and *y* of the activity verb *sweep*. The ACT denotes a sweeping event. Structure (82c) indicates that the same ACT predicate becomes the first argument of a CAUSE predicate whose second argument is a BECOME predicate. This scenario shows clearly that *y* changes its state as a result of the event (i.e. becoming clean). This captures the fact that the sentence in (82c) consists of the same acting event as in (82b), but results in a change of state in (82a) except that there is also a causing subevent.

3.1.2.3 Parsons (1990)

Adopting Vendler's (1957, 1967) verb classification system, and following Davidson's (1967) hypothesis that representation of sentences contain explicit references to events, Parsons provides a representation of English sentences in terms of ontology of events relatively similar to that of Vendler. However, Parsons's approach is based on sentence analysis rather than verbs, which is inappropriate to the issues surrounding argument realization. Although the relevance of his work is not directly related to the concerns of verb's argument realization, it is nevertheless geared to the analysis of verbs' argument structure because the analysis is based on feature decomposition.

Parsons provides an analysis of causative/inchoative verbs which he regards to be transitive verbs derived from a related adjective with the '*cause to become ADJ*' meaning. He points out that transitive verbs may or may not have intransitive counterparts but in either case, the meaning of transitive verb can be expressed as in (83) (Parsons 1990:120-122).

- (83) a. *x* closes the door
 b. *x* hammered the metal flat

Parsons in essence adopts Dowty's bi-eventive analysis of the causative that involves a causing subevent (like in the case of hammering the metal) and a resultant subevent (such as the example of the metal being flat as shown above). The two approaches seem to share many aspects but a major contribution made by Parsons is the introduction of event variables as an integral part in the lexical semantic representation of events. Parsons's analysis of simple sentences containing alternate verbs does not directly entail derivational relationship of the two variants. However, the model implicitly suggests that inchoative verbs are derived from corresponding adjectives (by the addition of *become*)

and the causative verbs are then derived from their related inchoative verbs (by the addition of *cause*). The analysis of causative alternations explored in the present study assumes a non-derivational approach in that neither causative nor anticausative variants are derived from one another (see discussion in chapter 5). Parsons's model is similar to the traditional lexicalist models discussed in section 3.2.2.1 and 3.2.2.2 that assume a derivational relationship of the two variants of causative verbs. The only difference is that Parsons implemented his model in terms of event semantics. A major view advanced in the present study is that there is no derivational relationship between causative and anticausative verb constructions, as evidenced in chapters 5 and 6.

3.1.2.4 Van Valin and LaPolla (1997)

Following Dowty, Van Valin and LaPolla (1997) analyze aspectual verb classes in terms of primitives. For example, these scholars analyze the verb *kill* as 'cause to die' and the verb *die* as 'become dead'. Following their analysis, the lexical semantic representation of *kill* would be 'x causes [y become dead]'. Van Valin and LaPolla (1997) substantiate their analysis of the verb *kill* with reference to the *Lakhota* language in which the verbs of *killing* according to them can be derived from the verb *t'a* 'die/ be dead' by adding instrumental prefixes, as exemplified in (84).

(84) Derivation of the verb *kill* in Lakhota (Van Valin & LaPolla 1997:90)

- | | | | |
|----|-----------------------|----------------------------|---|
| a. | <i>t'a</i> | 'die, be died' | |
| b. | ka- <i>t'a</i> | 'cause to die by striking' | (<i>ka-</i> 'by striking') |
| c. | yu- <i>t'a</i> | 'strangle' | (<i>yu-</i> 'with the hands') |
| d. | ya- <i>t'a</i> | 'bite to death' | (<i>ya-</i> 'with the teeth') |
| e. | wo- <i>t'a</i> | 'shoot to death' | (<i>wo-</i> 'by action from distance') |

Considering the analysis in (84), notice that all the verbs of *killing* in Lakhota are formed from the basic verb *t'a*, meaning 'die' or 'be dead' via causativization by adding the instrumental prefix that causativizes the verb and codes a type of causing action.

Generally, the predicate decomposition perspectives discussed so far assume that the causatives and anticausatives differ in terms of the number of events involved. The proponents of the predicate decomposition approaches postulate that causatives decompose into three events, namely CAUSE, BECOME and STATE, while anticausatives involve BECOME and STATE events only. In the present study, it is argued that the causative and anticausative do not differ in terms of event decomposition, thus bringing a new perspective in this area of study. According to the present study,

the difference between the causative and anticausative alternations concerns the presence versus absence of an external argument introduced by a Voice head. The subsequent section reviews studies related to the causative alternations.

3.3 Studies on causative and anticausative alternations

The causative alternation, also referred to as the causative/inchoative alternation, is an area which has received prominent attention in the past decades both in typological and theoretical linguistic research (see Hall 1965; McCawley 1968; Dowty 1979; Williams 1981; Jackendoff 1990; Brousseau & Ritter 1991; Haspelmath 1993; Levin & Rappaport Hovav 1995; Pesetsky 1995; Reinhart 2000, 2002; Piñón 2001; Chierchia 1989/2004; Alexiadou et al. 2006, 2015; Schäfer 2008, 2009; Koontz-Garboden 2009; Alexiadou 2010; Alexiadou & Doron 2012, among others).

The reason for the vast body of research in this area may be attributed to the discrepancy and the complex nature of the constructions realizing (anti-)causative alternations within and across languages. Given the extensive research available, it is impossible to review all studies here. For the purpose of the present study, attention is given to studies that are directly relevant to the specific questions of this study, particularly questions related to the lexical semantic factors that determine the participation of change of state and change of location/position verbs in (anti-)causative alternations. Focus is also given to views on the properties of the external argument realizations in argument alternation constructions. The first part of this section presents a general overview of the (anti-)causative alternation notions, followed by three major competing approaches advocated by different scholars in presenting an account of causative alternations. Discussion of the relationship between anticausatives and other argument alternations such as passives and middles, forms part of this section as well.

3.3.1 General overview of previous studies on the causative and anticausative alternation

The causative and anticausative alternation is characterized by verbs with both transitive and intransitive uses in which a transitive use of a verb *V*, means roughly ‘*cause to V-intransitive*’ (Levin 1993; Levin & Rappaport Hovav 1995; Alexiadou et al. 2006, 2015; Schäfer 2008, 2009; Alexiadou 2010). Horvath and Siloni (2011) point out that the (anti-)causative alternation is attested in all human languages. They assert that cross-linguistically, in the causative alternation, the inchoative variant systematically involves a single predicate, whereas the transitive member of the alternation is interpreted as ‘*x does something to y*’, hence indicating a different predicate structures from the transitive form. This is in line with the view put forth by other scholars such as Schäfer (2009) who

asserts that in causative alternations, the sentence with the intransitive use of the verb denotes a change of state event undergone by some entity, whereas sentence with a transitive use of the verb denotes that the given change of state event has been caused by some different entity.

Recently, Beavers and Koontz-Garboden (2013) demonstrated that both causatives and anticausatives exhibit a Patient role, the entity that change state but that, unlike anticausatives, the causative variant subcategorizes for a causer, as (85) demonstrates.

- (85) a. The window broke
b. The girl broke the window

The anticausative sentence in (85a) shows the change of state undergone by an object (*the window*) in (85a). On the other hand, (85b) indicates that '*the girl*' is the logical subject and can be interpreted as the causer of the change of state to the object expression, '*the window*'. As these examples demonstrate, the two variants differ semantically, particularly in terms of argument realization. However, the causative and anticausative variants maintain some morphosyntactic relationship in that the subject in the intransitive use bears the same semantic relation to the verb as the object in the transitive use of the verb. The alternations exemplified in (85) are often referred to as the causative-inchoative alternation or anticausative alternation (Schäfer 2009). In this study these terms are used interchangeably.

The (anti-)causative alternation as illustrated in (85) has been the subject of much debate in linguistic theory and the existence of such structures raises many intriguing questions. Some of these issues which have been often discussed in the literature are: the meaning components that determine whether a verb participates in (anti-)causative alternations; the derivational relationship between the causative and the anticausative variants, and the relationship between anticausatives and other transitivity alternations such as passives and middles.

With regard to the first concern, it has been evidenced that most change of state verbs and non-agentive verbs of motion participate in the causative alternation. However, within and across languages, not all causative verbs have anticausative counterparts, and not all intransitive verbs have causative forms (cf. Levin & Rappaport Hovav 1995; Alexiadou et al. 2006, 2015; Schäfer 2008).

Schäfer (2009) and Alexiadou (2010), in particular, noted that there are a number of verbs that do not alternate in English but do alternate in other languages. Two different views have been provided in response to the question as to why some verbs may alternate in one language and fail to do so in

another. On the one hand, it has been proposed that there is always a transitive alternate; otherwise it is possible that a verb got frozen in one form in the lexicon of a given language (Reinhart 2002; Chierchia 1989/2004). On the other hand, scholars such as Haspelmath (1993), Levin and Rappaport Hovav (1995) and Schäfer (2007) postulate that the alternation is associated with the classification of verb meanings. These scholars propose that the major concern of (anti-)causative alternation studies has been, therefore, to identify meaning components that determine the behaviour of individual verbs. This view has informed the present study to explore properties of change of state and change of location/position verbs in Kiwoso that allow or disallow their members to participate in the (anti-)causative alternation.

Different scholars postulate that majority of causative verbs that exhibit anticausative variants are those that do not specify its subject for a specific theta-role (Levin & Rappaport Hovav 1995; Reinhart 2000, 2002; Koontz-Garboden 2009; Beavers & Koontz-Garboden 2013). Beavers and Koontz-Garboden, for example, noted that verbs that require intentionality of their subject arguments or manipulation of instrument arguments, rarely alternate. However, following on DeLancey (1984), Alexiadou and Schäfer (2006) note that in Jacaltec, the causative subject of alternating verbs is restricted to an agent argument only. Matsumoto (2000) evidenced similar cases in Japanese anticausative alternations. Alexiadou et al. (2006) state that in Greek, the implicit subject argument in passives is restricted to agent only. These observations indicate that verbs that participate in (anti-)causative alternation cannot be accounted for on grounds of the nature of the external theta-role. Therefore, the assumption that an unspecified external theta role can be suppressed while a specified external theta-role cannot, does not hold, challenging the detransitivization view of the causative alternation (see section 3.3.2.2).

Concerning the derivational relationship between the causative and the anticausative alternations (or variants), the discussion centres around two issues: firstly, the reason why anticausatives lack an implicit external argument, and secondly, which one among the transitive and intransitive variant is basic, and which one is derived, and where this derivation situates in the grammar (Levin & Rappaport Hovav 1995; Alexiadou et al. 2006, 2015; Schäfer 2009, among others). Both transitivization and detransitivization approaches have been proposed on account of the views on the derivational relationship of (anti-)causative alternations. Recently, Alexiadou et al (2006) advanced a third proposal, namely that (anti-)causative alternations do not stand in any derivational relationship to each other. Derivational and non-derivational perspectives on anticausative alternations are discussed in the following sections.

3.3.2 Approaches to the (anti-) causative alternations

3.3.2.1 Causativization approach

Causativization approaches assume that the causative is derived from the anticausative via a causativization process (McCawley 1968; Lakoff 1968, 1970; Dowty 1979; Williams 1981; Hale & Keyser 1986/2013; Brousseau & Ritter 1991; Pesetsky 1995). Both lexical and syntactic forms of the causativization process have been proposed in the literature. On the one hand, lexicalists such as Hale and Keyser (1986, 1987) propose that causativization adds a CAUSE predicate that introduces an external argument to the lexical representation of the anticausative variant. On the other hand, Harley (1995), Pesetsky (1995), Folli (2003), Folli and Harley (2005) and Ramchand (2008) propose a causativization rule in syntactic terms postulating that the verbal phrase can be split into several layers of verbal projections that provide a specifier position to merge an argument. The verbal layers are then combined by cyclic head-movement of the lowest verbal head. Therefore, causatives and anticausatives differ in terms of the presence versus absence of the verbal layer projected by a head expressing causation and which introduce the external argument. The following subsections discuss some specific perspectives on causativization to the (anti-)causative alternation.

3.3.2.1.1 Lakoff (1965, 1970)

Many scholars working in generative semantics postulated that verb meanings can be decomposed into basic components that involve a limited set of basic event predicates and a lexical core, the latter being the root (Lakoff 1965; McCawley 1968; Dowty 1979; Hale & Keyser 1987; Levin & Rappaport Hovav 1995). These scholars assume that verbs stand in a derivational relationship and that an analysis of English verbs should invoke derivational approaches. Specifically, Lakoff (1968; 1970) and McCawley (1968) argue that in order to capture various entailment relations, particularly the relationship between sets of sentences involving morphologically and semantically related words (such as causative and anticausative sentences), primitive predicates should be introduced into semantico-syntactic structures. This idea manifests in Lakoff's (1965) analysis of the sentences in (86), from Dowty (1979:41).

- (86) a. The soup was cool
 b. The soup cooled
 c. John cooled the soup

According to transformational grammar, the sentences above are viewed to bear a systematic syntactic relationship in that the subject and predicate in sentences (86a) and (86b) contain the same

deep grammatical relation. This is the same relation observed between a verb and object in (86c). However, there are parallel selectional restrictions associated with the three sentences, suggesting that the three sentences cannot be derived from the same deep structure as assumed by the transformational grammarians. Therefore, Lakoff postulates different, though related sources of deep structure for the sentences (86b) and (86c), and the sentences in (87), taken from Dowty (1979:41).

- (87)
- a. The soup cooled
 - b. The soup became cool
 - c. The soup came to be cool
 - d. It came about that the soup was cool
 - e. That the soup was cool came about

Lakoff assumes that the sentences such as those shown in (87a), (87b) and (87c) are synonymous and plausibly derived from almost the same deep structure. Whereas (87c) is a transformed version of (87d) that involves *it-replacement* or, more generally, raising-to-subject transformation, (87d) is the extraposed form of (87e). As Lakoff asserts, if all sentences, that is (87a-e), come from the same, or almost the same source of deep structure, this source is then closely similar to (87e), where there is a sentential subject '*the soup is cool*' and an intransitive verb '*come about*'. Since abstract deep structure elements with semantic significance were being introduced at that time, Lakoff considered sentence (87a) to differ from others in having an abstract verb with the feature +INCHOATIVE, where others had real verb *become* or *come about* with about the same meaning. This analysis attests that the deep structure of (87a) is contained within that of (87b), hence the coincidence of grammatical relations and selectional restrictions is thereby predicted. Lakoff holds the view that (87e) is parallel to (87b) and it is possible to find paraphrases of (87c) which are plausibly transformational versions of it but only that have one more clause than (87b), similar to (88b), which has one more clauses than (87a), as (88) also from Dowty (1979:42) illustrates.

- (88)
- a. John cooled the soup
 - b. John caused the soup to cool
 - c. John made the soup cool
 - d. John caused the soup to become cool
 - e. John brought it about that the soup was cool
 - f. John caused it to come about that the soup was cool

Lakoff maintains that if all sentences such as those presented in (88a-88f) come from the same or, at least, structurally identical deep structures, those structures will contain the deep structure of (88d), which is embedded in a higher sentence that has the main verb *cause*, *make*, or the semantically similar abstract verb with the feature +CAUSATIVE, as shown in figure 7 and 8, quoted from Dowty (1979:42-43). This also accounts for the parallel grammatical relations, selectional restrictions, and meaning between (86b) and (86c).

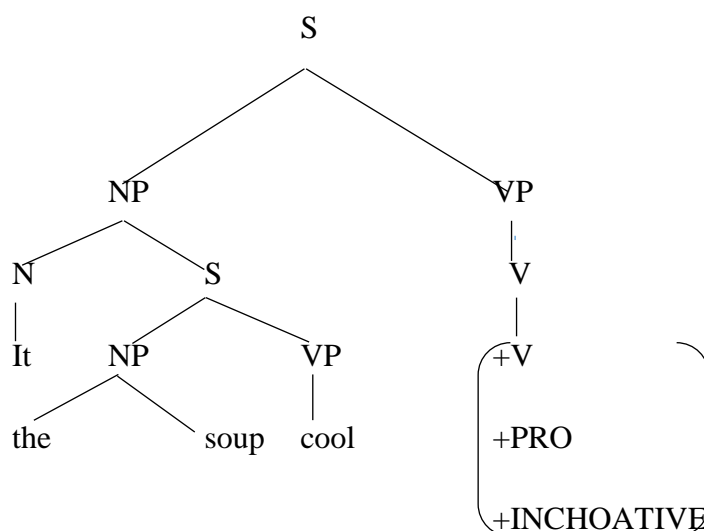


Figure 7: Lakoff's (1965) structure of the inchoative of sentence (87a) quoted from Dowty (1979:42)

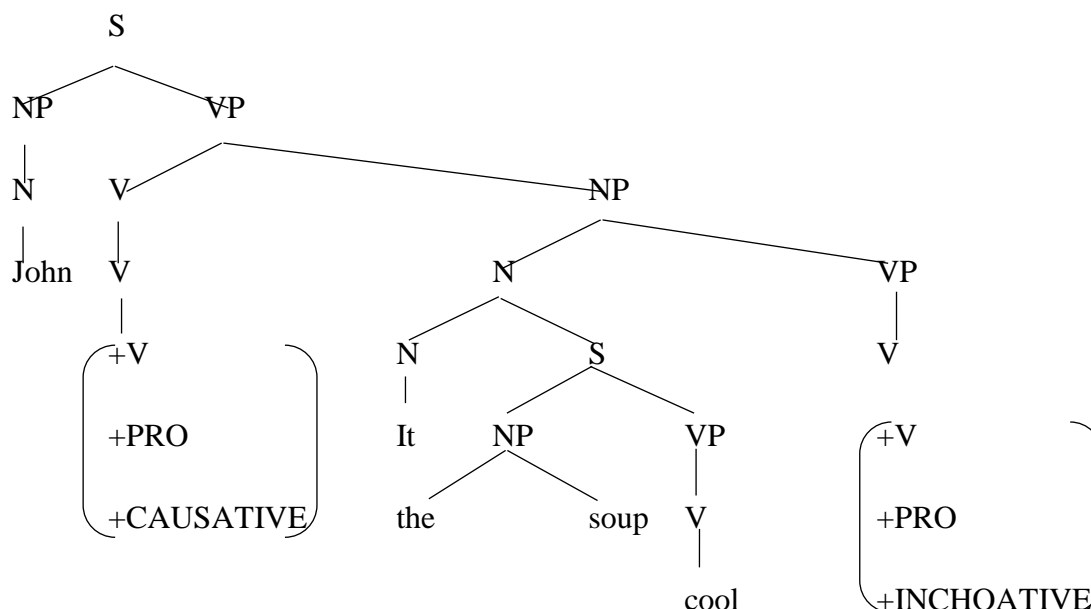


Figure 8: Lakoff's (1965) structure of the causative of sentence (88a) quoted from Dowty (1979:43)

Lakoff points out that with such deep structures as shown above, the obligatory transformations will replace the abstract verbs with the real lexical verb from the lower clause, thus reducing the two or three clauses of the deep structure to a single clause in each case. In fact, it is acknowledged by scholars that at the level of deep structure, most surface forms in languages such as English are represented as complex expressions rather than single elements.

3.3.2.1.2 McCawley (1968)

Like other generative semanticists of the late 1960's, McCawley (1968) addressed the question of how individual lexical items of a language replace multiple parts of an underlying tree in the course of derivation. McCawley's proposal towards this puzzle was developed by using an example of the verb *kill*. He suggested that the verb *kill* can be analyzed into components CAUSE, BECOME, NOT, and ALIVE as presented in figure 9 (underlying structure of $(x \text{ kills } y)$).

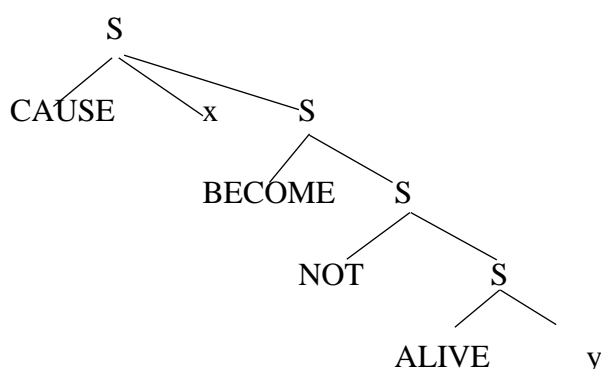


Figure 9: McCawley's underlying structure of $x \text{ kills } y$ quoted from Dowty (1979:44)

McCawley holds the view that parts of the tree have to be rearranged through transformations so as to form a single constituent before lexical transformation could insert the single word *kill*. He argues that according to the principle of transformational grammar, a single constituent rather than parts of different constituents has to be replaced or moved first. He proposes a transformation of predicate lifting, later referred to as predicate raising, which attaches a predicate element such as CAUSE, BECOME, NOT and ALIVE in the tree. Thus, the successive stages of the derivation of the surface structure from figure 9 is presented in figure 10.

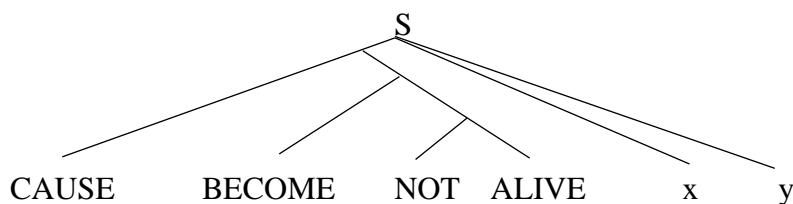


Figure 10: McCawley's derived surface structure of *x kills y* quoted from Dowty (1979:45)

McCawley asserts that elements corresponding to *kill* as demonstrated in figure 10 form a single constituent and a lexical insertion transformation will replace a sub-tree consisting of just this collection of elements with the word *kill*.

He postulates that the predicate-raising transformation was to be an optional one at each stage. If it did not apply at all these stages in a derivation as is the case in figure 10, different lexical items would be inserted to replace the different abstract elements or group of elements that appeared as a single constituents. Consequently, from the same deep structure, other English sentences could also be derived such as *x causes y to become not alive*, *x causes y to become dead*, *x causes y to die* and *x bring it about that y is dead* (Dowty, 1979:45). Indeed, in (anti-)causative alternations, it is possible to derive constructions with various syntactic realizations sharing similar lexical items but with some unique elements of meaning present in one variant that is not available in the other variants.

3.3.2.1.3 Dowty (1979)

In examining the derivational nature of causative/inchoative verbs, Dowty (1979) postulates a decompositional causative rule. According to this rule, causative forms are claimed to be derived from intransitive variants in which a predicate CAUSE is added to the semantic representation of the causative verb. Using an example of the verb *break*, the rule can be translated as in (89).

- (89) a. *break*_{inch} [Become BROKEN (x)]
 b. *break*_{cause} [(x) Cause Become Broken (y)]

The structure in (89a) illustrates the intransitive/inchoative or anticausative form of the verb *break* which Dowty regards as a basic form, whereas (89b) represents the derived form in which the CAUSE element is added to the interpretation of the verb *break* making it transitive/causative. Dowty (1979:206) proposes rules which he terms as S23 and T23, that derive anticausative verbs from stative adjectives by adding the suffix *-en*, or sometimes without changing the form of the word (verb). He

states that anticausative verbs derived from stative adjectives add a predicate BECOME to their semantic nuances. However, Dowty later on noted several exceptions of the causative rules such as its applicability to certain verbs (for example, that not all transitive verbs have intransitive counterparts) and the altered semantics of the derived verbs after the application of the rule. Recognizing such exceptions, Dowty considers causative rules to have the status of lexical redundancy rules (see Dowty 1979, chapter 6).

Dowty elaborated his system in terms of systematic semantic relation between adjectives such as ‘cool’ and ‘open’ and their cognate transitive and inchoative verbs. He argues that the property ‘cool’ is the stative predicate expressed by the adjective ‘cool’ (cf. example 86) as logically shown in (90) (adapted and modified) from Dowty (1979:206-7).

- (90) a. adjective *cool* (e.g., *the soup was cool*)
 $y[\text{cool}'(y)]$
- b. intransitive verb *cool* (e.g., *the soup cooled*)
 $y[\text{BECOME}[\text{cool}'(y)]]$
- c. transitive verb *cool* (e.g., *John cooled the soup*)
 $X [[\dots x \dots] \text{CAUSE} [\text{BECOME} [\text{cool}'(y)]]]$

Similarly to other proponents of the causativization approach to the (anti-)causative alternations, Dowty’s system is derivational in nature. The system suggests that causative verbs are derived from anticausative counterparts by the addition of the operator CAUSE. Generally, the views outlined so far entails that causative verbs are morphologically marked, thus complex, whereas anticausatives are unmarked, hence morphologically simple. However, this view is called into question as the discussion presented in the following sections make clear.

3.3.2.1.4 Hale and Keyser (1986)

It has been established in lexicalist theories that the operation of causativization adds a causative predicate to the lexical representation of the anticausative base. Hale and Keyser (1986), in particular, organize the lexical entries in terms of lexical conceptual structure (henceforth, LCS). In terms of the LCS, the basic structure of alternating verbs such as *break* according to Hale and Keyser, is represented as in (91a), and its counterpart, as in (91b).

- (91) a. basic LCS of *break*: [BECOME *BROKEN*(x)]
 ‘The glass broke’
- b. derived LCS of *break*: [(y) CAUSE [BECOME *BROKEN* (x)]]
 ‘John broke the glass’

Hale and Keyser maintain that the single argument of the intransitive alternant (as illustrated in 91a) represents a passive participant in the event denoted by the verb (i.e. theme). They argue that intransitive verbs, (e.g., *break*) are monadic due to the fact that its LCS project a single theta-role, i.e. the theme which functions as a syntactic object. On the other hand, the LCS of transitive verbs have two theta-roles, an agent and a theme, hence it is dyadic. Following Williams (1981), Hale and Keyser (1986) assert that the agent role in the transitive version as illustrated in (91b) is an external argument which is introduced via the causativization process. They contend that the basic lexical entry does not assign any role to the external argument (agent); hence this argument is free to assume the subject function in syntax.

Furthermore, Hale and Keyser point out that similar to intransitive alternation of causative verbs as exemplified in (91), verbs of motion exhibit the same characteristics in their canonical use. They postulate that active intransitive verbs of motion are monadic in nature and their single argument bears the subject function in syntax. Contrary to the anticausative variants of the causative verbs in which their single argument is a Theme and assigned to the object, verbs of motion are semantically different in that their single argument is an active participant which is basically interpreted as an agent and, therefore, assigned to the subject position (e.g., *the horse jumped (over the fence)*). However, according to Hale and Keyser, these verbs may undergo the causativization process which would derive the transitive alternant from the basic intransitive.

3.3.2.2 Detransitivization approaches

The detransitivization approach assumes that alternating verbs are inherently dyadic predicates and that anticausative variants lack an implicit external argument due to the detransitivization operation that creates an intransitive variant from the transitive variant (Grimshaw 1982; Chierchia 1989/2004; Levin & Rappaport Hovav 1994, 1995; Reinhart 2000, 2002). These scholars share the view that the detransitivization operation is lexical in nature. However, the details of implementation on how the anticausative is derived from its causative counterpart differ significantly from scholar to scholar, especially in relation to the question of whether anticausatives involve a causative meaning. The

following subsections are discussions of specific views of some of the advocates of the transitive base approach to the (anti-)causative alternation.

3.3.2.2.1 Grimshaw (1982)

Grimshaw assumes that the anticausative is derived from its causative counterpart via a lexical operation of detransitivization. She argues that the causative version of alternating verbs is basic and that the anticausative form is derived from causative by means of a detransitivization operation that deletes the CAUSE predicate from the lexical conceptual representation deriving the intransitive variant. Grimshaw's detransitivization rule is as presented in (92).

- (92) Detransitivization rule
- a. causative: [(x) CAUSE [BECOME *BROKEN* (y)]]
 - b. anticausative: [BECOME *BROKEN* (y)]

Grimshaw's lexicalist account on detransitivization is challenged by the Monotonicity Hypothesis which states that word formation operations can add decompositional operators to a word's lexical semantic representation but cannot remove them (cf. Koontz-Garboden 2007). Furthermore, Grimshaw's proposal about the restriction of the detransitivization operation to change of state verbs does not hold for the reason that within and across languages, verbs that participate in (anti-)causative alternations differ substantially.

3.3.2.2.2 Chierchia (1989/2004)

Chierchia analyzes anticausative verbs as reflexives. He proposes that anticausatives are inherently transitives, and that the intransitive variant is derived via reflexivization. He asserts that reflexivization (R) is an operation that takes the relationship of the two arguments of the verb to be the same and identical with one another, as (93) illustrates.

- (93) $R(\text{verb})(x) \leftrightarrow [\text{verb}(x)](x)$

Chierchia argues that in (anti-)causative alternations, the transitive variant is a causative form in the sense that its meaning has to be specified in terms of the CAUSE predicate. As he points out, the meaning of anticausatives is the reflexive form of the causative variants. He views reflexive as a meaning denoting that something internal or some property of the object causes a given object to change state. He contends that with anticausatives, the causing factor must be understood not as an

action, but as a state, which can semantically distinguish anticausative variants (e.g., *the boat sank*) from the reflexive form (e.g., *the boat sank by itself*). The former sentence implies that the boat is given capacity of performing an action, (which is signified through the notion of anthropomorphizing the boat), while the latter implies that the boat has or comes to have a property that causes its sinking. Chierchia is in favour of the second interpretation, hence her analysis of the anticausative as a reflexive, is in essence driven by the second interpretation, which is static in nature.

However, the reflexivization argument has been challenged by researchers invoking the fact that the morphology of most languages use the reflexive marker used in anticausatives for other purposes including voice marking in passive and middle verb constructions (Schäfer 2009). Therefore, the challenge is to determine whether such voice phenomena can be explained meaningfully in terms of reflexivization. The claim that the reflexive phrase (i.e., *by itself*) is found with anticausative verbs only is questionable because *by itself* phrase appears with other verbs as well. Schäfer (2008, 2009) noted that the reflexive phrase can co-occur with other verbs provided the context suggests that the given verb expresses a linguistically caused event, for example periphrastic causation. This scholar demonstrates that in German, for example, the reflexive occurs with the eventive copular *werden* ‘become’ verb, which is not intransitive, contrary to the claim by Chierchia that the reflexive phrase is restricted to intransitives. Along the same lines, Folli (2003) notes that manner of motion verbs can co-occur with reflexive phrases in Italian.

It has been noted that the semantics of the reflexive phrase as proposed by Chierchia is also problematic. This scholar argues that the reflexive phrase in anticausatives suggests the presence of a causer of a change-of-state. However, across languages, *by itself* phrase suggests that there is no external force that can be construed as a causer of a change of state experienced by the theme argument (cf. Reinhart 2000; Pylkkänen 2002, 2008; Alexiadou et al. 2006).

Detransitivization accounts face the opposite challenge that causativization approaches face in that the former assume the anticausative variants to be marked by special morphology as an indication of a derivational process, while the latter assume the causative variants to be morphologically marked since they are the derived forms. Both approaches are inadequate in accounting for anticausative alternations for the reason that detransitivization approaches cannot account for the languages that mark their causative variants, and causativization approaches would not account for the languages that mark their anticausative alternant.

3.3.2.2.3 Levin and Rappaport Hovav (1994, 1995)

Levin and Rappaport Hovav view causative and anticausative verbs as inherently dyadic predicates with a lexical semantic representation structures given in (94). They argue that anticausative variants lack an implicit external argument due to the lexical process of detransivization that introduces an intransitive entry from the transitive verb.

(94) [x DO-SOMETHING] CAUSE [y BECOME < STATE>]]

In (94), *State* is regarded as a stative predicate constant. Following the schema in (94), Levin and Rappaport Hovav propose an analysis of alternating verbs such as *break*, in a way that resonates with the illustration in (95).

(95) [x break_{caus-incho}] y[y break_{incho}]
 [[x Do-something] cause[y become Broken]]

Levin and Rappaport Hovav proposed a bi-eventive analysis of causative verbs. The two subevents they suggest are the *causing* subevent and the *central* subevent. They argue that the central subevent specifies the change of state associated with the verb (Levin & Rappaport Hovav 1995:83). They furthermore assert that the *causer* argument of the verb is associated with the *causing* subevent, while the *theme* argument relates to the *central* subevent. They suggest that in the transitive use of the verb *break*, for example, the ‘*cause*’ and the ‘*theme*’ are projected from the lexical semantic representation (LSR) into argument structure (AS) and then from argument structure onto the syntax, as in (97). On the other hand, in its intransitive use, ‘*cause*’ is lexically bound in the mapping from LSR to AS, hence it is not projected into the syntax, as (96) illustrates.

(96) Transitive form of the verb ‘break’

LSR	[[x DO-SOMETHING] CAUSE [y BECOME <i>BROKEN</i>]]	
Linking rules	↓	↓
AS	<x>	<y>

- (97) Intransitive form of the verb ‘break’
- | | |
|--------------------|--|
| LSR | [[x DO-SOMETHING] CAUSE [y BECOME <i>BROKEN</i>]] |
| | ↓ |
| Lexical binding | θ |
| Linking rules | ↓ |
| Argument structure | <y> |
- (Levin & Rappaport Hovav 1995:108)

According to Levin and Rappaport Hovav, alternating verbs with the lexical semantic representation in (96) denote externally caused verbs that involve in their semantics the external causer which brings about eventualities denoted by the verbs. These scholars postulate that the verb *break* has causative semantics even in its intransitive use, and that the intransitive form comes about due to the lexical binding of the external causer before the mapping to argument structure.

The analysis presented by these scholars proposes that external arguments form part of lexical semantics of verbs as their representation of the lexical semantics of the verb *break* suggests. Their representation of the alternating verbs exemplified in (96) entails that the external causer is the true argument of the verb. However, contemporary theories of argument structure suggest that external arguments are not true arguments of the verbs (see Marantz 1984) and (section 3.5 for details). It has been proposed, therefore, that external arguments are not projected by the verbs; rather they are projected by a functional head identified as Voice (see Kratzer 1994, 1996, 2005; Alexiadou et al. 2006, 2015; Schäfer 2008; Alexiadou 2010).

3.2.2.2.4 Reinhart (2000, 2002)

Reinhart's analysis of (anti-)causative verbs is partly informed by Chierchia (1989/2004). Although the two linguists seem to agree about a common detransitivization rule, their implementation of it is different. In contrast with Chierchia, the detransitivization analysis advanced by Reinhart does not build on event decomposition; rather, she assumes that lexical entries encode theta-relations between a verb and its arguments. Reinhart suggests that causation is coded through the lexical cause (+c) feature that defines the set of theta roles that cause change, namely *cause*, *agent*, and *instrument*. She argues that alternating verbs are inherently transitive, hence select a (+c) external argument and [-c-m] theme internal argument. Reinhart further points out that the theta role features of arguments occur in a binary fashion. For example (+c/-c) expresses the presence or absence of causing event, while (+/-m) denotes whether the mental state is involved in the verbal event or not. Reinhart argues that

these features can occur in isolation or in combination. According to her views, an agent argument is characterized as (+c, +m), whereas the theme argument is (-c, -m). The feature (+c) in isolation is underspecified for (+m/-m), compatible with human agent argument as well as non-human causers. Reinhart is of the view that the roles defined by a single feature may have different contextual interpretations. For example, a *cause* which is [+c] argument may be realized as an Agent, and hence a [+c, +m] argument, or may also be realized as an instrument, thus presented as a [+c, -m] argument. Reinhart asserts that anticausative is derived from its transitive counterpart in the lexicon by a reduction operation known as expletivization that reduces the external *cause* (+c) role resulting into a one place intransitive verb entry, as shown in (98).

- (98) (a) $V_{acc}(\theta_1[+c], \theta_2) R_e(V)(\theta_2)$
 (b) $R_e(V)(\theta_2) = V(\theta_2)$

Reinhart postulates that there is a semantic distinction between the external role reduction and the internal reflexivization. She argues that the external argument reduced by reflexivization retains its semantic interpretation, while in expletivization, the argument is entirely suppressed. She advances the view that all anticausatives are derived from the causative counterparts and if it happens that an anticausative verb lacks a transitive variant in a language, the transitive counterpart is meant to be frozen and can feed lexical operations but can never be inserted into syntax. However, the evidence presented by both causativization and detransivization approaches that causative and anticausative verbs are derivationally related is inconclusive because neither causative nor anticausative verbs seem to be directly derived from one another. The following section focuses on non-derivational approaches to accounting for (anti-)causative constructions.

3.3.2.3 Syntactic decomposition approaches

As opposed to the lexicalist approaches discussed in sections 3.3.2.1 and 3.3.2.2, syntactic decomposition approaches assume that neither the causative nor the anticausative variant is derived from the other either through a lexical rule or a syntactic transformation. Following the views from Distributed Morphology (DM), syntactic decomposition approaches advance the view that the transitive and intransitive variant of (anti-)causative constructions are derived from the same root. In other words, both variants share a common base (cf. Marantz 1997; Borer 2005; Lohndal 2014). (See also section 3.4 for the discussion on DM).

The proponents of this approach (Kratzer 1996; Pylkkänen 2008; Alexiadou et al. 2006; Alexiadou 2010; Alexiadou & Doron 2012; Levin 2012, among others) assume that alternating verbs are

lexically associated only with the internal argument(s). As these scholars put it, an external argument of these verbs is introduced by means of functional heads such as *v* (i.e. little*v*) or Voice head (Kratzer 1996; Pytkkanen 2002, 2008). These scholars advancing these approaches share the assumption that the constraints on the alternation are the result of the lexical classification of the verbal root as well as other non-lexical factors. They maintain that the difference between verbs that describe internally caused events and those describing externally caused events is crucial among the lexical factors. The following subsections present specific views of some of the proponents of a common base approach to the alternate in causative alternations. syntactic decomposition assumptions proposed by Alexiadou et al. (2006, 2015) and Alexiadou (2010) are discussed in chapter 1 as part of the main theoretical perspectives adopted in this study.

It should be noted, however, that in relation to the studies on anticausative alternations, Alexiadou's works and that of co-authors are so many compared to studies of other scholars reviewed in this chapter. Therefore, studies by Alexiadou and co-authors, particularly their views on the approaches of the causative and the anticausative alternation are dealt with as a golden thread throughout, rather than in one sub(section). This is due to the reason that different aspects and developments as reflected in their various works are relevant in the present study.

3.3.2.3.1 Kratzer (1996)

Following Marantz (1984), Kratzer (1996) proposes that the external argument is not an argument of the verb, and thus it is not introduced by the verb, but rather by a distinct functional head to which she refers as a Voice. She asserts that semantically, the external argument is related to the verbal event and comes about due to a process called 'event identification'. According to Kratzer's observation and analysis of the external argument of the verb, it is tempting to conclude that causatives and anticausatives share the same event decomposition and that they differ only in the presence versus the absence of the Voice head. This idea has been adopted by several subsequent proponents of syntactic decomposition approaches, as will be discussed in the following subsections. According to Kratzer's view, the causative variants decompose as shown in (99b), while the anticausatives have the decomposition as in (100b).

- (99) a. Jane opens the door
 b. [Jane [Voice [open the door]]]
- (100) a. The door opens
 [CAUSE [the door broken]]]

3.3.2.3.2 Pylkkänen (2002, 2008)

Pylkkänen asserts that causative and non-causative verbs are distinguished on grounds of a syntactically implicit event arguments ranging over causing events. She argues that these causing events are introduced through a causativization rule. She further proposes that such a rule does not, however, project an external argument causer, but rather that the external arguments such as agents and causers are introduced on top of CAUSE, by a Voice head (cf. Kratzer 1996). Pylkkänen argues that all causative constructions involve the head CAUSE which combines with non-causative predicates and introduces a causing event to their semantics (Pylkkänen 2002:75). She suggests that the structure of a causative element is universally represented as in (101) (see also Pylkkänen 2002:76).

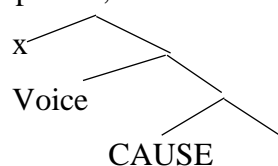
$$(101) \text{ CAUSE: } \lambda P.\lambda e.[(\exists e') P(e') \ \& \ \text{CAUSE}(e,e')]$$

Pylkkänen points out that CAUSE and Voice are semantically separate heads, and that the CAUSE can occur without the presence of the Voice. In other words, causative predicates can exist in the absence of an external argument. She asserts that although CAUSE and Voice are semantically separate, syntactically, they can either project their own syntactic heads, as in (102a), or can be ‘bundled’ together into a semantically complex head, as (102b) illustrates.

(102) Variation: Voice-bundling

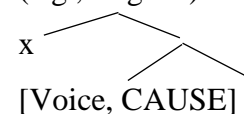
a. Non-Voice-bundling causative

(e.g., Japanese, Finnish)



b. Voice-bundling causative

(e.g., English)



This proposal suggests that non-bundling languages such as Japanese and Finnish, (102a) should have a causative predicate without an external argument, while the causative predicates of ‘bundling’ languages like English cannot appear without an external argument. Generally, similarly to other syntactic decomposition advocates, Pylkkänen proposes that the variants in the causative and anticausative alternations are syntactically derived.

3.3.2.3.3 Fernando (2013)

Fernando (2013) investigates the applicability and suitability of the syntactic decomposition approach in accounting for the causative and anticausative alternation constructions in a Bantu language *Kikongo (Kizombo)*. Following Alexiadou et al (2006) and Alexiadou (2010) this scholar explores the properties of *Kikongo (Kizombo)* change of state and change of location/position verbs in terms of the structural nodes of Voice, vCAUS and Root.

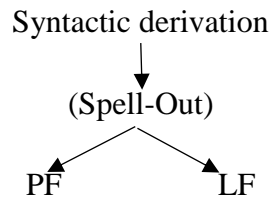
His study demonstrates that in *Kizombo*, both change of state and change of location/position verbs productively participate in causative and anticausative alternations. Fernando argues that alternation in *Kizombo* is mainly determined by idiosyncratic lexical semantics of individual verb root rather than syntactic properties. He asserts that the causative and anticausative alternates are base-generated, thus there is no derivational relationship between the two variants. Similarly to other studies conducted within the syntactic decomposition framework, example sentences examined in *Kikongo (Kizombo)* confirm that the difference between the causative and anticausative alternates is the presence of a Voice functional head which introduces an external argument.

Fernando's (2013) study gives evidence that in *Kikongo (Kizombo)* both causative and anticausative variants of externally caused change of state verbs involve a Voice head. On the other hand, all internally caused change of state verbs and the anticausative alternates of change of location/position verbs do not involve a Voice functional head. These findings suggest that whereas the causative and the anticausative variants of externally caused change of state verbs in *Kizombo*, as well as the causative sentences of change of location/position verbs realize an external argument, internally caused change of state verbs and the anticausative variants of change of location/position verbs do not express an external argument. There is no study on (anti-)causative alternations which has been carried out in Kiwoso. The present study aims to employ syntactic decomposition perspectives to explore change of state and change of location/position verbs in a Bantu language Kiwoso, in order to establish their properties in the causative and anticausative alternations, as well as their relationship with other argument alternation sentences such as passives and middles.

3.4 Distributed Morphology

Syntactic decomposition approaches are broadly couched within the framework of Distributed Morphology (DM), a non-lexicalist approach to word formation proposed by Halle and Marantz (1993; 1994). The architecture of grammar adopted in DM is illustrated in (103). In DM, the syntax involves a set of rules that generate syntactic structures, which are then subject to further operations in the derivation of the Phonological Form (PF) and Logical Form (LF) interface levels.

(103) The Grammar



Under this view, the phonological expressions of syntactic terminal nodes are inserted after the syntax has built all the relevant semantic and syntactic feature bundles. That is, phonological expressions contribute information related to phonology only and not that associated with syntactic or semantic. In Distributed Morphology (DM), this is referred to as the late insertion hypothesis (Halle & Marantz 1994) which holds that insertion of phonological materials follows all syntactic operations. It is still a matter of debate in the current literature as to whether later insertion is applicable to both Roots and functional morphemes. In relation to the present study, it is assumed that the two functional heads, *v* and Voice, are phase heads, thus they trigger the Spell Out of their complements.

The DM approach assumes that every word is formed by syntactic operations (Move and Merge). The principles of morphology are, therefore, to a large extent the principles of syntax because in the default case, the morphological structure at PF is simply the syntactic structure. However, in more complex cases, some extra operations apply at PF level to modify syntactic structure.

In DM, the units that undergo the syntactic operations, Move and Merge, are called *morphemes*. Given the widely held view that syntactic structures are hierarchical tree structures, these morphemes are the terminal nodes that represent the syntactic constituents of such trees. The morphemes are categorised into two groups: the Roots, which make up an open class (or lexical categories) containing items such as $\sqrt{\text{CAR}}$ or $\sqrt{\text{SIT}}$, and the abstract morphemes such as [PLURAL] or [PAST] which are understood as *functional categories* in syntactic theory.

It is generally assumed that Roots are grammatically category-neutral but never appear ‘bare’, they must always be categorized by virtue of being in a local relationship with one of the category-defining functional heads such as little *v*, *n*, and *adj* (cf. Marantz 1997):

- (104) **Categorization principle:** Roots cannot appear without being categorized; Roots are categorized through a process of combining them with category-defining functional heads (see Embick & Noyer 2007; Embick 2010).

The categorization principle in (104) entails that building verbs, for example, involves merging a Root with a functional head v ($\sqrt{\text{ROOT}} + v = \text{'Verb'}$). Distributed Morphology (DM) assumes a cyclic phase-based syntax model, proposed in (Chomsky 2000, 2001). In this model, a phase domain in syntax corresponds to a local domain in word formation, in that a local domain predicts aspects of the phonology and interpretation of words (Embick 2010; Bobaljik 2012). This concept of locality is also applicable in the analysis of causative and anticausative alternations discussed in the present study (see chapters 5 and 6). For example, the functional head v constitutes a cyclic domain that determines the interpretation and the phonology of the Root which also denotes event implications.

DM also assumes underspecification of morphemes with respect to syntactic and semantic information. This hypothesis is illustrated by Embick with reference to the syncretism of the Greek voice morpheme (Embick 1997, 1998, 2004). Embick argues that the occurrence of the Greek voice morpheme in various syntactic contexts such as reflexive, passive and anticausative is attributed to the fact that the morpheme is underspecified in that it is sensitive only to a certain syntactic environment shared by those syntactic contexts, namely, v without an external argument. He maintains that the morpheme does not correspond to the semantics of v , rather, it is sensitive to whether v is in a particular relationship with an external argument. This is to say that, the occurrence of the morpheme depends on the syntax of the relevant head, not the semantics. In the present study, the morpheme *-ik-* that appears in anticausative and middle constructions in Kiwoso is similar to the Greek voice morpheme and, therefore, it is sensitive to a certain syntactic property, the head v_{Cause} shared by these structures, rather than the semantics of each verb structure.

3.4.1 The Root

The term root is relatively familiar from morphological and phonological perspectives compared to from a syntactic viewpoint. However, there have been a growing body of research which suggest that there are empirical and conceptual advantages to consider roots as the most basic syntactic building blocks. For example, within Distributed Morphology (DM) and related frameworks concerned with the study of the lexicon, morphology, and syntax interfaces (see Hale & Keyser 2002; Borer 2005; Ramchand 2008) it is postulated that syntactic structures are built by two basic units, namely, functional elements and roots. The former units constitute the members of a 'closed class' (e.g., plural,

past), while the latter are involved in word formation processes and form the ‘open class’ category. For example, the verbal predicate is a combination of a functional head *v* (a verbalizer which brings about event implications) and the root. Harley (2009:131) asserts that roots carry the non-grammatical, encyclopaedic semantic content of a given category. She maintains that roots can be construed as lexicalization of a pure concept, although their interpretations can vary depending on the morphosyntactic context in which they appear.

It has been proposed that roots fall into different ontological classes depending on their encyclopaedic semantics, which then influence their syntactic realization (Marantz 1997; Harley & Noyer 2000; Alexiadou et al. 2006, 2015, among others). These scholars emphasise that a classification of this nature determines the way roots combine with other elements in the syntactic structure, thus influencing the number of arguments a root can realize.

According to the syntactic decomposition approach adopted in this study, in regard to causative and anticausative syntax, verb meaning is built on the basis of three core elements, namely; Root, *vCaus*, and Voice (see chapter 1, section 1.8.1). This view on verb meaning allows for broad verb classes to be defined (cf. chapter 1, example 7). Generally, in relation to causation, verbal roots have been classified broadly as denoting external or internal causations, depending on their encyclopaedic semantics (Levin & Rappaport Hovav 1995; Alexiadou et al. 2006). Classification along the two schemes determines whether a root occurs in a transitive (causative) syntax, must occur in intransitive (anticausative), or it can freely occur in both causative and anticausative syntax. However, it has been evidenced that the behaviour of a verb is not totally defined by the root concept. There are cases in which the verb in combination with an object determines whether a verb alternates or not. This suggests that a specific morphosyntactic context in which the root occurs determines verb alternations, not merely by the root. Therefore, the properties of whether verbs undergo the causative alternation, or not, is not necessarily encoded in a Root, but can be derived compositionally by the [Root + theme] combination (i.e. a *vP*) (cf. Alexiadou et al. 2006, 2015; Schäfer 2008).

Furthermore, scholars (see for example Schäfer 2008; Levinson 2014) argue that roots may be language specific in that a root which appears to express similar concepts sometimes behaves differently across languages. Nevertheless, categorizing roots into classes leads to a deeper understanding of argument realization and interpretation properties of various classes of verbs and lends more support to the view that verbal roots are associated with the grammatically relevant meaning components. The concept of root is significant in the present study since it makes it possible

to explain the properties of change of state and change of location/position verbs in Kiwoso that determine the participation of these verbs in the causative and the anticausative alternations.

3.5 The external argument and the Voice head

The syntactic realization of arguments and their semantic interpretation have been the concern of most theories of argument structure (Keyser & Hale 1993). The projection and interpretation of external arguments (i.e. expressions that correspond to the subject argument in a simple transitive use of a verb) have been the central concern of theories of verbal argument structure (Marantz 1997; Kratzer 1996).

In most theories of argument structure, the external and internal arguments are clearly distinguished. Generally, the majority of theories assign a specific status to the external argument. Williams (1981), for example, underlines the external argument in a verb's lexical entry to show the asymmetry between such an argument and its internal counterpart. More recently, Grimshaw (1990) defines the external argument as the most prominent argument in relation to both thematic and aspectual hierarchy. Conversely, Marantz (1984) postulates that the external argument is not an argument of the verb. His suggestion is grounded on the observation that there are many instances where a particular kind of internal argument in combination with the verb triggers a particular kind of interpretation of the external argument, but the external argument cannot trigger a special interpretation of the verb. Marantz exemplifies this kind asymmetry between the external and internal arguments, as in (105).

- | | | | |
|-------|------------------------|----------------------------|---------------------------|
| (105) | <i>through a ball</i> | <i>kill a conversation</i> | <i>take a bus to town</i> |
| | <i>through a party</i> | <i>kill a cat</i> | <i>take a nap</i> |

Although Marantz presents important arguments in support of the assumption that external arguments are not true arguments of their verbs, he does not elaborate on the question of how such arguments are introduced to the argument structure of the verbs.

Building on Marantz's observations, Kratzer (1996) has argued convincingly that external arguments are not arguments of verbs, and that they are introduced in the argument structure by a functional head she names Voice (i.e. a functional element denoting a thematic relation that holds between the external argument and the event described by the verb). Following Johnson (1991) and Bowers (1993), Kratzer maintains, therefore, that external arguments are arguments of Voice, and hence are base-generated in the position of specifier (SPEC) of VoiceP. She states that direct objects are

arguments of V, thus base-generated in SPEC of VP. Kratzer's idea of Voice is illustrated in figure 11

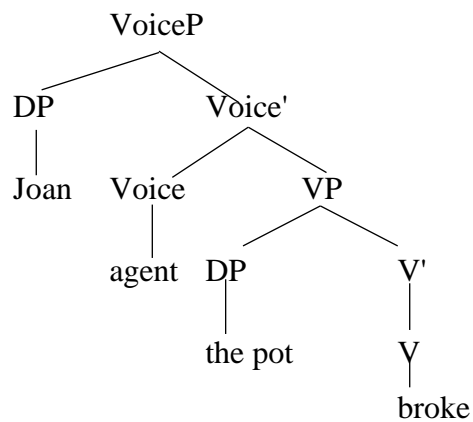


Figure 11: External and internal arguments realization

In figure 11, *the pot* (theme) is an internal argument of the verb denoting the affected entity. The external argument, *Joan* (an agent), is introduced by secondary predication because it is not an argument of the verb. According to Kratzer, the Voice functional head combines with the VP by a rule of semantic composition to which she refers to as *event identification*. This rule is a conjunction operation that makes it possible to link the thematic relation born by the external argument into the meaning of the VP. In other words, Voice combines with the meaning of VP through *event identification*. For example, in figure 11, the event that the external argument is the agent of the *breaking* event and the ‘breaking event’ itself are identified as being the same event. It has also been noted that in causative alternations, similarly to agent arguments, causer arguments are introduced by a VoiceP (Alexiadou et al. 2006, 2015; Alexiadou & Schäfer 2006; Schäfer 2012). According to these scholars, in addition to a Voice_{AGENT} and a Voice_{HOLDER}, UG provides a Voice_{CAUSE} head. Alexiadou et al. (2015) point out that the Voice_{AGENT} introduces an argument and assigns to it a theta-role, while Voice_{CAUSE} introduces an argument and relates it to the causing event instead of assigning to it a role itself. Generally, Voice adds one argument to the event and thematically relates such an argument to the event described by the verb.

Ultimately, the assumption that the external argument is not an argument of the verb is now standard in most syntactic studies. This assumption is equally important in the present study in that the properties of argument alternations addressed in this study could not otherwise be accounted for adequately if the Voice notion was not invoked. Thus, one of the contributions of the present study is to show that although external arguments are obligatory in some syntactic contexts (unlike, for

instance, most internal arguments like indirect object), they are nevertheless ‘additional’ in that their realization in verbal argument structure is achieved through secondary predication.

3.5.1 Agent versus causer external arguments

It has been argued that in anticausative alternations, two types of external arguments have to be distinguished (Schäfer 2008; Alexiadou et al. 2006, 2015). These scholars argue that the two distinct arguments are differentiated in terms of agentivity and non-agentivity features of the verb (cf. Kim 2011). Agentive arguments denote agent arguments of events while non-agentive arguments denote causers of an event. Schäfer (2008) in particular argues that in change of state events, the distinction of external arguments is important because events of change combine with entities that bring about the events in different ways.

With regard to causative verbs, two types of Voice heads are distinguished: Voice_{AGENT} which introduces an Agent argument and Voice_{CAUSE} which realizes Causers (Schäfer 2008). This is in line with the argument made in Alexiadou et al. (2006, 2015) that agentivity and causation are represented by different heads in the decomposition of causatives, but the event head of the alternates in causative and anticausative alternations is the same (cf. chapter 1, section 1.8.1). Other studies have shown that causers are distinguished from agent arguments by virtue of being inherently eventive (Schäfer 2012; Alexiadou et al. 2015), and, therefore, they can modify the causative subevent. Levin and Rappaport Hovav (1995) express a similar idea in stating that “causers correspond to the entire causing subevent”. In the same vein, Pylkkänen (2008:93) postulates that a causer “does not name a participant of the causing event, but rather names the causing event itself”. On the other hand, agents of causative verbs name participants in the causing event, specifically instigators of events denoted by the verb, while causers are traditionally assumed to be non-human entities, particularly natural forces (e.g., wind, earthquake, sunshine, just to mention a few).

Alexiadou et al. (2015) also argue that Voice_{AGENT} and Voice_{CAUSE} are distinct in that whereas Voice_{AGENT} introduces an agent argument and assigns to it a thematic role, the Voice_{CAUSE} introduces a causer argument and relates it to the causing event, hence no thematic role is assigned to it. Voice head introducing causers denote identity relation between events rather than thematic relation.

It has also been established that a Voice head is distinguished depending on whether the external argument is overtly realized (active) or implicitly expressed (passive). It has been argued that in both active and passive verb constructions, Voice involves a thematic feature although only the active Voice projects a specifier (Embick 2004; Schäfer 2008).

3.6 The distinction between anticausatives, passives and middle verb constructions

It has been noted that causative alternations are similar to passive and middle verb constructions in that the subject in the intransitive use bears the same semantic relation to the verb as the object in the transitive use (Schäfer 2009). Example (106) is illustrative of the relation between the causative alternation, the passive and generic middle constructions.

- | | | | |
|-------|----|-----------------------|-------------------------------------|
| (106) | a. | Jane opened the door | <i>transitive (causative)</i> |
| | b. | The door opened | <i>intransitive (anticausative)</i> |
| | c. | The door was opened | <i>passive</i> |
| | d. | The door opens easily | <i>generic middle</i> |

Despite syntactic properties (sometimes morphological properties for some languages) being shared by the argument alternation constructions as (106) illustrates, there are clear semantic features that distinguish anticausative, passive and middle constructions. It has been proposed that anticausatives, passives and middles are semantically distinct based on the presence versus absence of an implicit external arguments (Hale & Keyser 1986; Chierchia 1989/2004; Levin & Rappaport Hovav 1995; Reinhart 2000, 2002; Pinon 2001; Siloni 2003; Marelj 2004; Alexiadou et al. 2006, 2015, among others). Invoking this view, primary diagnostics that justify the presence versus absence of an implicit external argument have been proposed in the literature, as discussed in the following subsections.

3.6.1 Prepositional phrase modification

Scholars have pointed out that contrary to anticausatives, passive verb and middle constructions involve an external argument which is syntactically covert but semantically understood (Marantz 1984; Levin & Rappaport Hovav 1995; Reinhart 2000; Chierchia 1989/2004, among others). These scholars argue that passives are compatible with *by*-phrase which realizes the implicit argument but that the anticausative cannot co-occur with such a phrase. Hale and Keyser (1986), Ackema and Schoorlemmer (1994), Reinhart (2000), Siloni (2003), and Marelj (2004) assert that middle constructions distinct from anticausatives allow instrumental PPs which denote the presence of an implicit external arguments in the former and lack of it in the latter. Prepositional modifiers in passive and middle verb constructions are exemplified in (107).

- | | | |
|-------|----|---------------------------------|
| (107) | a. | The glass was broken (by James) |
|-------|----|---------------------------------|

- b. The glass broke (*by James)
- c. This pineapple cuts easily (with a new knife)
- d. This glass broke (*with a stone)

Sentences in (107) suggest that although passives (107a) and middles (107c) lack the explicit projection of an external argument syntactically, this feature is semantically active, contrary to their anticausative counterparts, as illustrated in (107b) and (107d), respectively.

However, other scholars (Marelj 2004; Kallulli 2006; 2007; Schäfer 2008; Koontz-Garboden 2009) have noted that prepositional phrases (PPs) modification licenced by passives and middles indicate the presence of a specific type of implicit external argument, particularly intentional agents. In the same vein, Schäfer (2009) argues that anticausatives do not licence a *by*-phrase but in many languages they can combine with specific PPs that introduce non-human causers or causing events, as illustrated in (108) (Schäfer 2009:671).

- (108) a. The window broke (from the pressure)/ (*from Mary)/ (*by Mary)
- b. The flowers wilted (from the heat)/ (*from Mary)/ (*by Mary)

The PPs *from the pressure* in (108a), and *from the heat* in (108b) are causer-PPs that can occur only in anticausatives. Such occurrences suggest that the thematic source is located in their event decomposition and the prepositions themselves introduce the causative semantics which is, however, language specific. One controversy is evidenced in the literature regarding the analysis of the PPs in anticausatives. Kallulli (2007) postulates that similarly to the PPs that introduce an agent implicit external argument in passives, the PPs in anticausatives introduce an implicit external argument which must obviously be a causer. Other scholars (Doron 2003; Alexiadou & Schäfer 2006; Solstad 2009; Schäfer 2012; Alexiadou et al. 2015) assert that anticausatives can co-occur with PPs that license causers and causing events, which indicate that anticausative verbs contain a cause component. In contrast to Kalluli (2007), these scholars maintain that causer-PPs that combine with anticausatives are inherently eventive, and therefore denote event modifiers rather than event participants (arguments).

3.6.2 Agent-oriented adverbial modification

Another feature that distinguishes anticausative, passive and middle constructions is their co-occurrence with agent-oriented adverbials (e.g., intentionally, deliberately, purposely...). It has been

established that only passive verb constructions are compatible with these adverbials, and that middles and anticausatives cannot co-occur with such adverbials (Manzini 1983; Marantz 1984; Schäfer 2009). It has been pointed out that agent-oriented adverbials in passives reflect the presence of an agent argument that is capable of licensing such adverbials in passive structures (Manninen & Nelson 2004). It can, therefore, be argued that anticausative and middle constructions are incompatible with agent-oriented adverbials because they neither contain an agent argument nor an agentive projection that would allow licensing of agentive adverbials, thus their co-occurrence is impossible, as evidenced in (109).

- (109) a. The door was opened (deliberately) (by John)
 b. This door opens (*deliberately) easily
 c. The door opened (*deliberately)

3.6.3 Control and purpose clauses

Purpose clause and the insertion of a control clause are among the standard diagnostics used to validate the presence versus absence of an implicit external argument in anticausative, passive and middle constructions. As Schäfer (2009) notes, unlike anticausatives, passives allow purpose clauses and because of the presence of an implicit external argument in passives, it permits control of the covert PRO-subject of purpose clauses. However, since anticausatives lack an implicit external argument, control fails, as illustrated in (110) (Schäfer 2009:646).

- (110) a. The vase was broken [PRO to awaken a sleeping child]
 b. *The vase broke [PRO to awaken the sleeping child]

Furthermore, it has been noted that both passives and middles can licence the implicit PRO-subject of adjunct clauses but anticausatives cannot (Stroik 1992; Reinhart 2000) This is exemplified in (111) from Schäfer (2009: 646).

- (111) a. The potatoes will be peeled [after PRO boiling them]
 b. The potatoes will peel easily [after PRO boiling them]
 c. Babies often roll/turn after [putting them in bed]

Notice that in sentences (111a) and (111b), one can note that the peeler and the boiler can be the same person although it is not necessary. However, such co-reference is not possible in the anticausative

construction in (111c). The implication in (111c) is that the children are not rolled by those who put them in bed, and therefore control fails.

3.6.4 *By-itself* phrase

Studies have established that anticausatives differ from passives and middles in that only anticausatives allow the *by-itself* phrase, as (112) illustrates. The phrase *by-itself* has been interpreted as ‘alone’ and ‘no particular cause’ (Alexiadou et al. 2015). It has been noted that the ‘alone’ meaning is irrelevant in anticausatives, thus *by-itself* in this case is taken to mean ‘no particular cause’ (Levin & Rappaport Hovav 1995; Alexiadou et al. 2015).

- (112) a. The window was broken (*by itself)
 b. This window breaks easily (*by itself)
 c. The window broke (by itself)

The *by-itself* phrase in (112) excludes the presence of anything external as the participant of the event denoted by the verb *break*. Whereas (112c) is construed as nothing can be identified as a cause responsible for the event of *breaking* the window, (112b-c) have a similar reading, but the sentences are ungrammatical because of the implicit external argument associated with the events described in those sentences. It has been demonstrated that, passives and middles involve an implicit external argument that specifies a causer of events, while the *by-itself* phrase excludes the presence of a causer.

Generally, I concur with other scholars (Marelj 2004; Kallulli 2007; Schäfer 2008) that the standard tests employed to distinguish anticausatives, passives and generic middles serve as a diagnostics for the absence of volitional agents in anticausatives. This is mainly due to the fact that natural forces, non-intentional causers (e.g., wind, earthquake, storm, heat ...) cannot license agentive adverbials or effect control into purpose clauses, even when they are overtly expressed as subjects of causative variants. However, the fact that *by*-phrase in passives can license both human (an agent) and non-human causers which are both incompatible with anticausatives suggests that the difference between passives and anticausatives lies in the presence versus absence of an implicit external argument, not just in the type of theta-role the *by*-phrase realizes. This fact is supported by the *by-itself* diagnostic discussed in this subsection. The present study is aimed at exploring the properties of change of state verbs in anticausative, passive and generic middle constructions in Kiwoso to determine the morphosyntactic and aspectual verb class similarities and differences. A unified analysis of this nature is needed for Bantu languages.

3.7 Aspectual verb classes

The classification of verbs into semantic verb classes was mainly inspired by philosophical thought that started as far back as the days of Aristotle, who evidenced that, whereas the meaning of some verbs necessarily involve an ‘end’ or ‘result’, others do not. Aristotle distinguished three event types: *States*, *Performances* and *Activities*. This classification was later on discovered to be valid in linguistics by various linguists, including Ryle (1947). In his study, Ryle classified verbs in classes of Achievements (resultative verbs) and Activities (irresultative verbs). He argues that Achievements (e.g., *win*, *find*, *prove*...) can be described as events happening at a particular moment, whereas Activities (e.g., *keep*, *hold*, *listen*...) are perceived as happenings that may last for a longer period of time. On the other hand, Kenny (1963) identified Performances (Ryle’s achievements), Activities, and States as verb classes. Nevertheless, the semantic classification of verbs did not gain much significance in linguistics until Vendler's (1967) classic study. Aspectual classes have been fruitful in lexical semantic research and have been widely adopted as appropriate event types for restructuring lexical semantic representations and formulating principles of argument realization. Therefore, it is appropriate for the lexical semantic representations to be grounded in the principles of event structure, as assumed in event types. Levin (2000) notes that lexical semantic representations grounded in event structure are necessary in accounting for temporal properties of events. The following subsections present the views of some scholars on aspectual verb classes considered relevant for the present study.

3.7.1 Kenny (1963)

Kenny adopted, with some modification, Aristotle's three-way classification of verbs into semantic classes. He identifies *States*, *Activities*, and *Performances* as the main classes of verbs. As he argues, *State* and *Activity* verbs describe actions with no terminal point, while *Performances* denote actions with an endpoint. His criteria of classification is based mainly on semantic entailments and whether the event described by a particular verb can be understood as having taken place, even when it is still in a progressive form. According to Kenny's viewpoint, the distinction between *Activities* and *Performances* can be illustrated as in (113).

- (113) a. Activities: she is driving/she is walking
‘Entails that she has driven/she has walked’
- b. Performances: she is drawing a picture/she is reaching the top
‘Does not entail that she has drawn the picture/she has reached the top’

Instances in (113) demonstrate that Activities and Performances are distinguished on grounds of delimitation. While performances are delimited to actions or events with an inherent endpoint, Activities are not constrained to that state. From the entailment relation of the Performance sentence in (113b), it becomes plausible that unless the action reaches its final endpoint, it cannot be construed as having taken place, in contrast to the actions described by Activity verbs, as (113a) demonstrates. Unlike Performances, Activities are non-delimited. They are thus understood as having happened even when still on-going. Therefore, delimitation is the key feature that characterizes Kenny's Performance verbs.

3.7.2 Vendler (1967)

The classic study by Vendler was the first of its kind which introduced philosophical thoughts into the field of linguistics. Vendler extended the Aristotelian classification model and proposed a four-way classification of aspectual verb types based on their restrictions on time adverbials, tenses, and logical entailments. Vendler's four semantic classes with examples are as illustrated in table 14, adopted from Dowty (1979:54).

States	Activities	Accomplishments	Achievements
know	run	paint a picture	recognize
believe	walk	make a chair	spot
have	swim	deliver a sermon	find
desire	push a cart	draw a circle	lose
love	drive a car	push a cart	reach
		recover from illness	die

Table 14: Vendler's semantic verb classes with examples

To characterize his four verb classes, Vendler (1967:106) used the following time schemata:

- i. **Activity:** *A was running at time t* means that time instant t is on *a* time stretch throughout which *A* was running.
- ii. **State:** *A loved somebody from t_1 to t_2* means that at *any* instant between t_1 and t_2 *A* loved that person.
- iii. **Accomplishment:** *A was drawing a circle at t* means that t is on *the* time stretch in which *A* drew that circle.
- iv. **Achievement:** *A won a race between t_1 and t_2* means that the time instant at which *A* won that race is between t_1 and t_2 .

Vendler's time schemata suggest that Activity verbs refer to the period of time that are non-unique and indefinite, whereas Accomplishments imply unique and definite time periods. On the other hand, Achievements involve unique and definite time instants while States involve time instances in an indefinite and non-unique sense. Notice that, parameters such as instant and stretch, and the temporal elements of definiteness, or indefiniteness as indicated by the articles *a* and *the* form an important part of Vendler's time schemata that defines the four classes indicated above. Vendler's classes which are based on the [\pm Definite] and [\pm Process] parameters can be summarized as in table 15.

Verb classes	Process	Definite
States	[-]	[-]
Achievements	[-]	[+]
Activities	[+]	[-]
Accomplishments	[+]	[+]

Table 15: Vendler's semantic verb classes and parameters

Vendler used various criteria to distinguish one class from another. He further categorised the four classes into two major groups on the basis of their behaviour with respect to other clause elements such as tenses, time adverbials, and other semantic factors. Invoking these factors, Vendler groups States and Achievements into one group as well as Activities and Accomplishments to a second group. He contends that the former group is incompatible with progressive tenses while the latter pair can co-occur with progressives. Vendler argues that Activities and Accomplishments are process verbs as they indicate processes going on in time, hence they have an indication of a time stretch, while State and Achievement verbs that lack continuous tense are non-process verbs, hence predict the instant time. The criteria of continuous tense (hereafter, CTC) is as exemplified in (114).

- (114) a. She is making a mat/you are writing a letter *Accomplishments*
 b. He is riding a bike /she is swimming *Activities*
 c. *You are wanting apples/she is liking me/ *States*
 d. *They are finding the answer/he is identifying me *Achievements*

According to Vendler's CTC, sentences (114a) and (114b) are grammatical, while (114c) and (114d) are illicit. Verbs such as *make* and *write* are instances of Accomplishments that can co-occur with a progressive form, which is also the case with Activity verbs including *ride* and *swim*, as (114b) illustrates. On the other hand, *want* and *like* are States which behave the same way as Achievements, *find* and *identify*, as (114d) demonstrates.

Despite his contributions, Vendler's CTC have not gone unchallenged. Verkuyl (1993) states that apart from the observational inadequacy of progressive form, the form does not do what it is assumed to do. As Verkuyl points out, instead of expressing progress in time, most of the continuous tense sentences employed seem to express some specific sort of agentivity more than progress in time. Verkuyl asserts that the CTC is not clear-cut because it pertains to both progress in time and the notion of agentivity in a way suggesting progressive form and agentivity factors to be identical or closely related, which is not the case. He argues that progressive form is more closely related to temporality. Vendler's agentivity and temporality features of the four semantic classes of verb are presented in table 16.

Four classes in ProgF	Agentive	Process
She is loving the visitors	[+]	[-]
They are walking	[+]	[+]
The company is making little profit	[-]	[+]
The weather is destructing my concentration	[-]	[-]

Table 16: Agentivity and temporality features of verb class semantics

Vendler also employs *for*-phrase and *in*-phrases adverbials and the entailment based relations to further characterize the four verb classes. He is of the view that Accomplishments and Achievements differ from Activities and States in that the former allow the co-occurrence of *for/in* phrase adverbial modifications, whereas the latter do not licence such modifiers, or rather sound odd with this type of modifications. Vendler's *for/in* phrase adverbials modification is as illustrated in (115), (116), and (117).

- (115) a. Students ran for two hours (*for-phrase*)
 b. *Students ran a mile for two hours (*for-phrase*)
- (116) a. ?Students ran in two hours (*in-phrase*)
 b. Students ran a mile in two hours (*in-phrase*)
- (117) a. ?It took them two hours to run (*take-verb*)
 b. It took them two hours to paint a picture (*take-verb*)

Durative adverbials such as the *for*-phrase in (115) are commonly used in aspectual verb class studies to distinguish entailment relations among semantic classes of verbs (cf. Verkuyl 1972; 1989; Dowty 1979; Levin & Rappaport Hovav 2005). The *for*-phrase modification provides a clear intuitive

interpretation in that the duration expressed by such a time adverbial is incompatible with the concept of a unique definite event that is discernible by its bounds as in ‘ran a mile’ in (115b).

According to Vendler, Activity and Accomplishment verbs differ in that Accomplishments have set endpoints, thus for an action expressed by such verbs to be what it is claimed to be, it should reach the terminal point. On the other hand, activities do not have a set terminal point and an action expressed by Activity verbs needs not to reach a culmination for it to have communicated what it is intended to communicate.

3.7.3 Dowty (1979)

Dowty’s aspectual verb classification constitutes a major refinements of Vendler’s four-way classification. Dowty presents the criteria used in the Vendlerian classification in a more explicit and systematic linguistic fashion. His analysis of aspectual classes are reductionist in nature, in that Activities, Accomplishments, and Achievements are constructed out of one or more Stative predicates which directly underlie State verbs, and operators such as BECOME and CAUSE. He points out that if V_n is one of an n -place predicates and a_1, \dots, a_n its argument(s), the four classes can then properly be exemplified as in (118).

- (118) i. States $V_n(a_1, \dots, a_n)$
 ii. Activities DO ($a_1, V_n(a_1, \dots, a_n)$)
 iii. Accomplishments DO ($a_1, V_n(a_1, \dots, a_n)$)CAUSE BECOME ($V_n(a_1, \dots, a_n)$)
 iv. Achievements BECOME ($V_n(a_1, \dots, a_n)$)

Dowty’s presentation of the four classes in (118) indicates that the pattern for States is reflected in each of the three other classes. Thus, Activity is a relation between an argument and a State upon which the DO-operator has a certain semantic effect. Dowty in essence proposes that Vendler-classes are dependent on the model-theoretic interpretation of BECOME, CAUSE and DO, as connected to States. Dowty revised Vendler’s classes based on three parameters as illustrated in table 17.

Verb classes	Process	Definite	Complex
States	-	∅	∅
Activities	+	-	∅
Accomplishments	+	+	+
Achievements	+	+	-

Table 17: Dowty’s aspectual classes and parameters

3.7.4 Verkuyl (1989, 1993)

Verkuyl examined Vendler's proposal of aspectual classes and concluded that Vendler's four-ways classification is not appealing for the reason that he confused some of the criteria for distinguishing one class from another (cf. section 3.7.2). He asserts that Dowty's revision of the Vendler-classes based on time adverbials and tensed verb parameters were not useful for characterizing aspectual verb classes. Verkuyl proposes a classification based on two binary features, namely, continuousness and boundedness. He asserts that continuousness defines whether the event has direction, and boundedness determines whether the event has an inherent endpoint. On grounds of these two parameters, Verkuyl separates Activity and Accomplishment verbs from States and Achievements. He argues that, on the one hand, Activity and Accomplishment verbs describe events that take place over a period of time, contrary to State and Achievement verbs. On the other hand, Accomplishments and Achievements are bounded, whereas States and Activities are unbound. Verkuyl's aspectual classes and the two parameters are as demonstrated in table 18.

Verb classes	Continuous	Bounded
Activities	[+]	[-]
Accomplishments	[+]	[+]
States	[-]	[-]
Achievements	[-]	[+]

Table 18: Verkuyl's classification of verb class semantics

Generally, the studies reviewed in sections 3.7.1-3.7.4 indicate that boundedness (also known as telicity), duration, and dynamism are the key features that determine the classification of aspectual predicates. Bounded (telic) events (Achievements and Accomplishments) are described as events with natural endpoint. Conversely, unbounded (atelic) events (States and Activities) lack inherent natural finishing points, thus can continue indefinitely. Durative events (Accomplishment and Activities) are defined as events that occupy time, while non-durative events (States and Achievements) are idealized to a point in time. Events are defined as dynamic when internal changes are not identical from time to time (e.g., Achievements, Accomplishments, and Activities). As opposed to dynamic events, their non-dynamic counterparts denote events which are unchanging from moment to moment, and that all their parts are uniform, for example, Statives. However, telicity, dynamicity, and duration parameters cannot be determined once and for all at the lexical level. It has been evidenced that other elements such as argument properties and the presence or absence of certain modifiers affect aspectual values (see Verkuyl 1993; Levin & Rappaport Hovav 2005). This suggests

that similar to aspectual classes, the defining features of the classes are also compositionally determined.

3.7.5 Smith (1991, 1997)

Smith proposes that an aspectual meaning offers two independent kinds of information. On the one hand, it provides information about situation type, which is presented from a particular viewpoint and indirectly classified as a state or an event of a certain type. On the other hand, an aspectual meaning offers information about the viewpoint aspect which presents the situation with a particular focus, giving a full or partial view of the situation talked about. Smith argues that the information about the situation aspect is conveyed by the verb constellation, i.e. the main verb and its arguments, including the subject and the verb's complement arguments, while viewpoint aspect information is conveyed by grammatical morphemes such as verbal and adverbials.

3.7.5.1 Viewpoint aspect

As demonstrated above, Smith (1991, 1997) describes the viewpoint as an aspect that gives temporal properties to a sentence. As she puts it, viewpoint aspect presents a situation with a particular perspective or focus in a way that it provides a full or partial view of the situation talked about. Smith identified three types of viewpoints, namely, perfective, imperfective, and a neutral viewpoint. She argues that perfective viewpoints present a situation in its entirety (i.e. the viewpoint spans an entire event). Imperfective viewpoints present only part of the situation (i.e. an imperfective viewpoint spans only part of the situation or event). On the other hand, a neutral viewpoint is flexible in that it may focus on an entire situation or may present only the internal stage of a situation. Perfective and imperfective viewpoints are exemplified in (119).

- (119) (a) Jane wrote a letter
(b) Jane was writing a letter

From the above cases, example (119a) presents situation as it has occurred in its totality. This is indicated by the form of the verb that specifies the perfective viewpoint. By contrast, (119b) implies that the event is still in progress and no one can claim its completeness. Smith maintains that although viewpoints are similar across languages, they are, however, not identical. She maintains that to know a language is to know the semantic value of the language's viewpoints and their distribution according to situation types.

3.7.5.2 Situation types

Building on others (Kenny 1963; Vendler 1967; Dowty 1979; Verkuyl 1989, 1993) Smith identifies five classes of situation types: *States*, *Activity*, *Accomplishment*, *Achievement*, and *Semelfactives*. These classes are distinguished in terms of temporal properties of dynamism, durativity and telicity, as illustrated in table 19.

Situation types	Temporal properties	Example sentences
States	static, durative	he likes oranges/they know the place
Accomplishments	dynamic, durative, telic,(involve process and outcome)	he wrote a letter/they build houses
Activities	dynamic, durative, atelic	she is cooking/they are swimming
Achievements	dynamic, telic, punctual	the students win/they spot them
Semelfactives	dynamic, atelic, punctual	the kid blinks/she sneezes

Table 19: Situation types and their temporal properties with examples sentences

3.7.5.2.1 Temporal features of situation types

Smith presented her proposal on situation types on grounds of conceptual temporal characteristics. She points out that in terms of temporal features, situation types are generally classified as states or events. Smith's temporal features are presented in terms of contrastive pairs in the following subsections.

3.7.5.2.1.1 Static versus dynamic

Smith presents states as the simplest situation type that involves a single period which cannot be differentiated. She asserts that states obtain in time but do not hold in time (i.e., they are both static/non-dynamic and dynamic). Static situation types do not change over time and a state of situation is the same at all times for which it holds. On the other hand, dynamic or non-static situations change over time and have stage property in that they involve successive stages which occur at different moments. Dynamic situations are subject to change whenever a new input is applied. Smith maintains that static features characterize *States*, whereas dynamic features describe *Events*, i.e. Activities, Accomplishments, Achievements and Semelfactives (cf. table 19).

3.7.5.2.1.2 Telic versus atelic

Smith (1997) asserts that telic situations are described as events that change state. Telic situation types involve the goal or an outcome of the event. Telic situations are kind of events that are expected by virtue of their internal characteristics to have a result state after the situation has reached its endpoint. She maintains that the events are counted as complete when the change of state has been achieved. On the other hand, atelic events do not involve natural culmination, they are just processes that can stop at any time and, therefore, regarded as events that involve arbitrary endpoints. Generally, whereas telic events constitute a goal or an outcome, atelic events do not (see examples in table 19).

3.7.5.2.1.3 Durative versus punctual

Smith postulates that situations can also be either durative or punctual. Situations that do not last in time are viewed as punctual or instantaneous events. Punctual or instantaneous events are situations that can be regarded to occur instantly, but do not last. Different from punctual events, durative events occupy and last in time, being it short or long. Situation types with their distinctive temporal features according to Smith, are summarized in table (20).

Situation types	Temporal features		
	Static	Durative	Telic
States	[+]	[+]	[-]
Activities	[-]	[+]	[-]
Accomplishments	[-]	[+]	[+]
Achievements	[-]	[-]	[+]
Semelfactives	[-]	[-]	[-]

Table 20: Situation types with their temporal features

3.7.5.3 Situation types

As pointed out in section 3.7.5, Smith identified States, Activities, Accomplishments, Achievements and Semelfactives as the main situation types distinguished by the temporal features of dynamism, durative and telicity. Smith's aspectual verb classes (situation types) are as discussed in the following subsections.

3.7.5.3.1 Statives

Smith argues that States are events that are described as stable situations that hold in time. She proposes that these situation types are characterized by static, durative and atelic temporal features (see table 20) and involve a homogenous period that lack an internal structures. States do not change over time unless some external agency induces such a change or changes. The initial and final

endpoints are two different situations that constitute part of a state. Smith presents the following temporal schema of states consisting of homogeneous periods, as presented in (120b).

- (120) a. Jane holds a bachelor degree in Linguistics
 b. temporal schema of state: (I) ----- (F)

The endpoints of the schema are given in parentheses to indicate that they are not part of the state. Example (120a) denotes that if Jane holds a bachelor degree in Linguistics today, there is no moment in which this state does not hold in her entire life just the same way as it holds today. Smith (1997) maintains that the non-dynamic nature of the stative situation type is reflected in an entailment that is a characteristic of states, as stated in (121).

- (121) When a state holds for an interval it holds for every sub-interval of that interval

Smith argues that statives have both concrete and abstract attributes of all kinds, namely possession, location, belief, dispositions, habits, and so forth. She contends that human beings may seem unable to classify internal situations because they are unobservable but in real sense humans have clear and consistent intuitions about how to classify such internal situations. She points out that in classifying ‘private predicates’ (as she puts it), people agree on [think that] as Stative and [think about] as dynamic, and Activity.

3.7.5.3.2 Activities

Activities are described as events that involve physical or mental actions, and consist entirely in the process. Dynamic, atelic, and durative are temporal features that characterize an Activity situation type. An Activity event is exemplified in (122a), and its temporal schema as proposed by Smith (1997) is illustrated in (122b).

- (122) a. Students walked in the garden
 b. Temporal schema of Activities: I F_{Arbitrary}

The temporal schema of Activity indicates that the end of an activity does not follow from the structure of the event. The arbitrary final endpoint of an Activity is bounded in time, either explicitly or implicitly. The notion of completion is invalid to a process event like Activity because Activity

events either terminate or stop, but they are not complete. Vendler (1967:133) puts it clearly that “Activities go on in time in a homogenous way; any part of the process is of the same nature as the whole”. In this regard, if students walked in the garden for some interval, the subinterval of their walking for a few minutes of the interval is also an instance of walking. Smith (1997) suggests that the part-whole relation of Activity is realized in a characteristic pattern of entailment between the whole and the parts, as (123) indicates.

(123) **Entailment pattern for Activities**

If an Activity event **A** holds at interval **I**, then the process associated with that event holds at all intervals of **I**, down to intervals too small to count as **A**.

She argues that when activities appear with certain time adverbials, they may have explicit, independent and bound features. For example, the sentence ‘*she drives for an hour every day*’ with explicit bound has a transformative effect on the verb constellation, thus produces telic properties of a sentence. Smith notes that the situation type value of an activity changes in the presence of explicit bounding adverbials. Independently bounded activities have a specific final endpoint and the grammatical correlates of telicity.

3.7.5.3.3 Accomplishments

Accomplishments involve a process and change of state. The process is completed when the change of state is achieved or obtained. Besides, Accomplishments are finite and bounded events, characterized by dynamic, telic, and durative temporal features. Accomplishments are exemplified in (124).

- (124) a. Juma painted the wall
b. She boiled some eggs

Smith points out that accomplishment events have successive stages in which the process advances to its natural final endpoint. When a process with a natural final endpoint reaches its outcome, the event is completed and cannot continue. Accomplishments finish or complete, while Activities stop or terminate. Smith (1997) provides a temporal schema of Accomplishments, as (125) illustrates.

(125) Temporal Schema of Accomplishments: IF_{Natural} (Result)

Smith refers to Dowty (1977) who argued that the relation between process and outcome of an Accomplishment is known as non-detachability. This implies that the process component and the outcome of the process cannot be disconnected from each other. Smith maintains that if the outcome of an Accomplishment is reached, the process occurred, hence proposes the entailment relation between the process and the outcome of accomplishment events, as illustrated in (126).

(126) **Entailment Pattern for Accomplishments**

If event **A** occurs at interval **I**, then the process associated with **A** occurs during the internal stages of that interval.

However, Smith states that not all Accomplishments complete. As long as Accomplishments involve process, events can complete or can be presented and judged as events in progress. Therefore, one can talk about events in progress by using the progressive viewpoints. For example, sentences such as ‘*Juma painted the wall*’ and ‘*Juma was painting the wall*’ should be judged differently. The former is an Accomplishment event that has been completed, whereas the latter is an event in progress which presents cases of situation that are going on and the intention of the participant is clearly implied.

Smith (1997) noted that sentences with atelic verb constellations and telic adverbials such as ‘*John swam laps in an hour*’ are instances of derived Accomplishments. This is because the sentence has a telic interpretation, i.e. that a particular amount of swimming took place in an hour. She further argues that derived Accomplishments may consist super-lexical verbs (e.g., *start*, *begin*, *finish*...) which focus one endpoint of an event. The endpoints of events denoted by verbs of this nature are changes of state with an internal structure, as exemplified in (127).

- (127) a. They slowly understand each other
b. They eventually began learning French

The sentences in (127) indicate that the outcome is a change from one state of not understanding each to another of understanding each other (127a), and from not knowing to knowing French (127b).

3.7.5.3.4 Achievements

Achievements are events that are punctual or instantaneous and involve a change of state, just like Accomplishment situations discussed in the previous section. Achievements are dynamic, telic and punctual. Although the preliminary or resultant stages of achievements may be associated with the

event itself, they are not considered part of the event. An Achievement event is exemplified in (128a), while example (128b) illustrates a temporal schema of achievement verbs, as proposed by Smith (1997).

- (128) a. She identified the book
 b. Temporal Schema of Achievements: . . . E_R . . .

Smith points out that achievement consists of a single stage, a change of state. However, in many languages, the concept of an Achievement includes preliminary and resultant stages, and thus the dots in the schema indicate the preliminary and resultant stages, as perceived in different languages. Although many Achievements are associated with preliminary processes, Smith argues convincingly that the concept of achievement is a single-state event, disconnected from any associated process. Therefore, in contrast to States (see section 3.7.5.3.1), Achievements have no part-whole entailment relation. An Achievement sentence is true and holds only for the moment of the event. If, for example, a sentence '*students found the solution of the problem*' is true for time T, it does not follow that '*students were finding the solution of the problem*' is true at that moment. Therefore, if the latter sentence is true at some moment, it is not at time T, may be would be a moment earlier than that.

Smith notes that although not all Achievements involve preliminary stages, most of them allow and require such stages as they may be conventionally essential. For example, Achievement events denoted by the verb *win* (e.g., win a game) and *reach* (e.g., reach the top) require preliminary stages because one cannot win the game without playing it. Neither can s/he reach the top without taking some steps. Nevertheless, there are other Achievements that do not involve a preliminary stage. For example, in the sentence '*Jane recognizes the professor*' one may presume that she has seen the professor previously, whereas the sentence '*I find the solution*' may or may not involve some preliminaries.

Smith points out that derived Achievement sentences appear with super-lexical verbs, such as start and finish. This is similar to derived Accomplishments (as discussed in section 3.7.5.3.3). The super-lexical verbs in achievement sentences focus on initial or final endpoint, as in '*Juma started cooking the food/ Juma finished cooking the food*'. Smith states that most inchoative verbs behave this way including those that refer to the events of recognition in which the event results in a state, as in '*know the answer*'.

3.7.5.3.5 Semelfactives

According to Smith (1997), semelfactives are single-stage events that lack result or outcome. Semelfactives are dynamic, atelic and instantaneous (punctual). They are simple events that consist only in occurrence. These events involve no process, as exemplified in (129a). Smith's temporal schema for Semelfactives is illustrated in (129b).

- (129) a. The student sneezed
b. Temporal Schema for Semelfactives: E

In the schema, E indicates a single stage event. Indeed, the sentence (129a) shows a single stage event of sneezing, which is inherently bounded. Smith (1997) maintains that although Semelfactives are conceptualized as instantaneous, they may nevertheless involve a discernible period of time, but this should not distract the perceived notion of Semelfactives as single stage events. She argues that when a person coughs or a bird flaps a wing, the events take some minutes though little to occur.

Smith points out that the distribution of Semelfactive verb constellations is restricted. She asserts that these verbs do not occur with imperfective viewpoint, durative adverbials or any other durative expressions. Smith notes further that sentences with Semelfactive verb constellations and durative adverbials are not ungrammatical. The sentences are simply interpreted as multiple-event Activities. For example, '*Mary coughs for an hour*' is like saying '*Mary was coughing*'.

3.7.5.4 Derived situation types

Apart from the five typical situation types presented in the previous subsections, Smith (1997) identified another group of situation types she regards as derived situation types. She argues that all languages have different mechanisms of shifting the aspectual value of a verb constellation in a way that classes change from one aspectual type to another. Smith's major mechanisms for derived situation types are discussed in the following subsections.

3.7.5.4.1 Super-lexical morphemes

Smith is of the view that a situation may be presented broadly as a whole, or it may be presented in terms of a narrow view with a focus of one endpoint or the middle of a situation only. Different languages have different ways of expressing broader and narrower views of situations. In English, for example, a broader view is expressed in a simple sentence, whereas narrower views are conveyed by verbs or phrases that have the simple sentence as a complement, as exemplified in (130a) and (130b), respectively.

- (130) a. John built the house
 b. John started building the house

Sentence (130a) presents the situation as a whole in its broader viewpoint. By contrast, in (130b), the situation appears in its narrower perspective. Smith points out that the function of the super-lexical morphemes such as *begin*, *finish* and others of that nature is to give a narrow view of a situation, while other lexical morphemes determine the type of situation presented. Therefore, whereas the lexical morphemes contribute to defining a situation type, super-lexical morphemes change the focus of a situation rather than determining the situation itself. Smith concludes that endpoints of all situations are telic events as they bring about a change of state; either into a situation (beginning) or out of it (finishing).

3.7.5.4.2 Multiple-event Activities

It has been pointed out in section 3.7.5.3.2 that an Activity is a situation type that consists of a succession of events. The multiple-event Activities, therefore, have a series of repetitions with an arbitrary endpoint, and the subevents of multiple-event activities may consist of all event types. Smith postulates that the verb constellation of multiple-event Activity sentence has the basic-level category of its sub-events. She points out that such sentences often have durative adverbials which shift the interpretation of a situation from a single event Activity to multiple event Activities, as (131) illustrates.

- (131) a. They knocked the door
 b. They **repeatedly** knocked the door
 c. They knocked the door **for ten minutes**

Sentence (131a) can be interpreted as a single-stage event as is the case with Semelfactives, different from the sentences in (131b-c) which can be perceived as Activities involving multiple events. The shift of aspectual type from (131a) to (131b-c) is triggered by the temporal adverbials used in those sentences. Smith argues that when there is a mismatch between the times presented in a sentence, the derived, multiple-event Activity reading arises. She maintains that the event may typically have a short or long duration depending on the temporal adverbials employed. She points out that in most cases, multiple-event readings emerge as a result of the presence of long durative temporal adverbials.

3.7.5.4.3 Habitual Statives

Smith has presented another derived situation type, the habitual statives. She asserts that in any situation types, habitual sentences are derived and these sentences present a pattern of situations and have stative reading, as (132) demonstrates.

- (132) a. Mary meets her supervisor weekly
b. They read the book on Sundays

Both sentences in (132) are semantically stative. Smith points out that this type of sentence denotes a single event or state at the basic level of categorization. However, she illustrates that a habitual interpretation may also be triggered by information in the context. For example, in a sentence, adverbials may signify a relatively long interval, whereas the events routinely require a relatively short interval. The difference between intervals presented by modifiers influences the habitual stative interpretation of a sentence.

Smith (1997) argues that although habitual sentences have stative reading, they lack the syntactic characteristics of stative sentences. She points out that habitual sentences can occur in imperatives, they are compatible with agent-oriented adverbials and the progressive form, in contrast to basic Statives.

3.7.5.4.4 Marked focus

In marked focus situation shift, Smith demonstrates that States are presented as events, and events as states. The aspectual choices are presented in a way that situation types consist of a marked focus, as (133) illustrates.

- (133) a. I am having zoology class
b. She was thinking that she wanted to go home
c. The river is smelling particularly bad these days

Smith argues that sentences like those in (133) are States with dynamism temporal feature and the focus of the sentences seem to be on dynamism, typical of events situation types. However, sentences with adverbials, as in (133c) may present the situation to be perceived as unusual. However, it is normal for a speaker during a conversation to present information in a marked or an unmarked focus depending on what the speaker wants to underline. Smith points out that a speaker may choose marked

focus to emphasize the internal stages of events as continuous or homogenous. When this happens, the sentences are interpreted as syntactically stative.

3.7.5.5 Basic level verb constellations

Smith (1997) states that there is a close relationship between verb constellations and situation types. She asserts that a situation type is determined by the verb constellation (i.e. main verb and its arguments), and that the interpretation of situation type depends on the particular verb, DPs, PPs, and sentential complements of a verb constellation. She emphasizes that the verb constellation is essential in the key notion of interpretation, and that to compose or interpret the situation type of a verb constellation, one needs to consider the relevant values of its component forms.

Smith points out that the role of compositional rules is to provide a natural mechanism for the situation type. These rules determine the situation type value of a given verb constellation according to its internal makeup. As Smith (1997:54) puts it, the rules assign to the constellation a composite value, an associated situation type. Smith adds that the situation type of a verb constellation is not identified by syntactic structure because all situation types are syntactically different. She suggests that nominal features are relevant to situation type. On the one hand, features such as [count] and [mass] determine whether a nominal is quantized or cumulative. On the other hand, the features of prepositional phrases such as [locative] and [directional] are also relevant and necessary. Smith argues that in English, the verb with the inherent [-telic] combines with two arguments, as (134) illustrates, an example taken from Smith (1997:55).

- (134) a The child walk the dog
 NP[+Count] + _v[-Telic] + NP[+Count] → VCon[-Telic]
- b The child walk to school
 NP[+Count] + _v [-Telic]] + pp[Direct'I] → VCon[+Telic]

In (134a), the verb has an atelic feature that is associated with a telic argument, whereas in (134b), the verb bears a telic feature that combines with a goal locative. This implies that aspectual values such as telic/atelic of the basic-level verb constellation are overridden by other relevant forms. Smith identifies this situation as a principle of compositional rule. The principle states that the aspectual value of the basic-level verb constellation is overridden by that of an adverbial or similar relevant form (Smith 1997:55).

The output of the rule is the derived verb constellation with its interpretation of an aspectual value. According to Smith the rule reads as follows: a verb constellation (VCon) with certain temporal features, combined with an adverbial is interpreted as a derived constellation (DVCon) with certain temporal features. To clarify her point, Smith offers examples in (135) (see also Smith 1995:55).

- (135) a. The child coughed for an hour
 b. $VCon [+Dyn -Telic - Dur] + Adv[+Dur] \rightarrow_{DVCon} [+Dyn -Telic + Dur]$

Smith states that by the principle of external override, the [+Dur] feature of the adverbial determines the feature value of the derived verb constellation. Whereas the feature cluster in the VCon is Semelfactive, the cluster in the DVCon is that of an Activity.

The present study explores the properties of sentences with change of state and change of location verbs in relation to argument realization and alternation in Kiwoso. Among other things, the study attempts to examine aspectual characteristics that determine the classification of verb roots into semantic classes in Kiwoso. In this study, Smith's (1997) situation types are widely employed for the reason that her classification has not only drawn from the previous versions of aspectual semantic verb classes (cf. 3.7.1-3.7.4), but has also extended and modified some of the basic features of these classes, as evidenced in the discussions.

3.8 Summary

This chapter presented an overview of previous research on argument realization, causation and event semantics. It discussed various typological and theoretical studies on argument structure, argument realization, causation, and aspectual semantic verb classes. Regarding argument realization, earlier theories such as thematic role list approach, proto-roles approach, and the predicate decomposition perspectives have been reviewed. The fundamental assumption shared by these lexicalist approaches is that argument structure is directly determined by the lexical properties of predicates. It has been evidenced that lexicalist perspectives cannot adequately account for argument realization, and several challenges associated with these approaches have been pointed out in this chapter. Given the weaknesses of the lexicalist based theories, scholars have suggested that argument structure has to be grounded on event semantics, and the patterns of argument realization should be inferable from lexical semantic representations based on the theory of event (see Levin & Rappaport Hovav 1995; Lin 2004; van Gelderen 2013). It has been established that contrary to semantic role approaches, in

predicate decompositions, the meaning of a verb that determines argument realization are decomposed into a more basic element.

In this chapter, the three major competing causative alternation theories (i.e. the causativization, detransitivization, and syntactic decomposition approaches) have been examined. It was argued that causativization and detransitivization approaches have shortcomings in that they cannot account for some cases across languages or even within a single language. On the one hand, causativization approaches are mainly justified by languages that mark the causative form. On the other hand, the detransitivization views are justified by the languages that mark the anticausative variant. However, both two approaches offer no explanation about the languages that mark none, one or both variants. It has been established that languages show variation and both processes, i.e. causativization and detransitivization exist across languages and even within individual languages. However, scant research has been conducted in this area in Bantu languages, and in Kiwoso in particular. The present study aims to contribute to the debate on anticausative alternations, and verbal argument alternations as a whole.

The recent syntactic decomposition approaches to (anti-)causative alternation are couched within the Distributed Morphology framework which assumes that verbs are derived from category neutral root by the addition of a verbalizing head. Syntactic decomposition approaches share the assumption that external arguments are not introduced by the verb itself, and the head that introduces the causative event, (vCause) does not also introduce the external argument. It is assumed that external arguments are introduced by Voice on top of vCause. In these approaches, the (anti-)causative alternation involves the same event decomposition, and that the difference between the two variants is the presence versus absence of the Voice which introduces the external arguments.

Aspectual verb classification has also been discussed in some detail with reference to different perspectives in this chapter. It has been established that event semantics defines argument realization in terms of temporal and mereological properties of the predicates that describe events. Aspectual properties such as telicity, measure, and the incremental theme determine argument alternation, particularly the direct object selection. The review of aspectual verb classes discussed in this chapter provides insights to the understanding of the event structure, giving evidence of different views of event structure that exist in research from different scholars.

CHAPTER 4

GRAMMATICAL RELATION CHANGING CONSTRUCTIONS IN BANTU LANGUAGES

4.1 Introduction

This chapter presents an overview of some previous studies on grammatical relation changing constructions in Bantu languages. It mainly focuses on previous descriptive and theoretical perspectives of scholars on the passive and stative verb constructions, and on locative inversion constructions. In relation to passive and stative constructions, particular attention is given to scholars' views on how the two constructions are derived and the syntactic effects of the derivation processes involved in terms of argument realization and argument structure alternation. The discussion of the various interpretations associated with passive and stative verb constructions in different Bantu languages is also presented. Various properties that distinguish passive from the stative verb constructions are reviewed in some detail.

However, it should be noted from the outset that the literature reviewed on the passive and the stative verb constructions, and that on locative inversion in Bantu languages cannot be claimed to be exhaustive. One of the reasons is that these constructions in some Bantu languages are well documented and have been widely studied, while for others they have not. In relation to passive and stative verb constructions, the detailed review of some of the languages such as Swahili, Chichewa, and most of the Southern Bantu languages, namely Ndebele, Zulu, and Sesotho receive significant attention due to the fact that these languages are well studied from both descriptive and theoretical perspectives. Moreover, the theoretical perspectives employed in the analysis of passive verb construction in this chapter are well tested in these languages. With regard to locative inversion constructions, some Bantu languages, namely Chichewa, Sesotho, Setswana, Kichaga and Otjiherero are examined for the reason that locative inversion is also well documented in these languages. Nevertheless, the study of locative inversion in English is also reviewed because locative inversion constructions in this language show some properties found in Bantu languages. Although the languages reviewed are not exhaustive, the reviewed studies form a representative sample of different Bantu languages which is considered sufficient for the purpose of this chapter, and this study in general.

The rest of this chapter is organized as follows: section 4.2 presents a general overview of grammatical relation changing constructions, and sections 4.3-4.6 present details of research on passive and stative verb constructions. Theoretical perspectives on the passive and the stative constructions, and their distinctions are presented in sections 4.7 and 4.8, respectively. Section 4.9

discusses generative approaches to passive constructions, while section 4.10 reviews locative inversion constructions. Theoretical approaches to locative inversion are presented in section 4.11. This chapter also discusses research on the typology and the semantics of motion verbs, and the unaccusativity phenomenon in sections 4.12 and 4.13, respectively. A summary and the conclusion of the chapter is provided in section 4.14.

4.2 General overviews on the grammatical relation changing constructions

A number of studies conducted on grammatical relations, also referred to as grammatical functions (Bresnan 2001), syntactic functions (Chomsky 1981), or syntactic relations (Kiss et al. 2015) have identified the subject and (direct) object as the two major grammatical relations across languages (cf. Perlmutter & Postal 1977,1983; Shibatani 1985; Baker 1988; Van Valin & LaPolla 1997; Tellerman 2005). Baker (1988) in particular points out that apart from the subject and the (direct) object relations, it is also common to find other relations in the clause, such as the grammatical relation of indirect object, object of preposition, and various types of obliques, including the relation of a prepositional phrase (PP) or its object. Generally, grammatical relations represent how DPs in the sentence structure function syntactically. Carnie (2013) asserts that grammatical relations are defined by the position in which the Determiner Phrases (DPs) occupy in the sentence, as (136) demonstrates.

- (136) a. John killed the snake
b. The snake killed John

Sentences in (136) illustrate that grammatical relations are syntactically defined. In (136a), the DP *John* functions as a subject, whereas in (136b) the same noun occurs as object. Similarly, *the snake* is a subject of the sentence in (136b) but an object in (136a). The representation of the DPs *John* and *the snake* in (136) demonstrates that grammatical relations are syntactic terms, that is, they are defined in relation to the syntactic position they occupy in a sentence.

However, the relationships between the verbs and the DPs in the sentences are not stationary. Languages exhibit various processes that alter grammatical relations in the clause. Scholars (for example, Baker 1988; Tallerman 2015) note that across languages, passive, antipassive, applicative, and causative are included in relation changing processes found in the majority of languages. They assert that passive is a renowned grammatical relation changing process cross-linguistically. The instances in (137) illustrate some key grammatical relation changing processes (Baker 1988:9-10).

- (137) a. **Passive**
Subject → oblique (or null); object → subject
- b. **Antipassive**
Object → oblique (or null)
- c. **Applicative**
oblique
indirect object → object: object → 2d object
null or oblique
- d. **Causative**
- (i) null → subject; subject → null
(i.e add a new subject and delete the old one)
 - (ii) null → subject
If there is an object, subject → oblique
Otherwise, subject → object
 - (iii) null → subject; subject → object
If there is an object, object → “2d object” (or oblique)

In (137), each grammatical relation changing operation is associated with morphological and syntactic changes in the second alternate of a pair. Instances in (137) indicate further that the verb form of the two alternates in a pair is the same, but the verb in the second alternate of the pair is accompanied by affixes which signal the presence of a relation changing process.

Many Bantu languages have clear morphological reflexes of grammatical relation changing processes, as also identified by Baker (1988). However, previous studies have generally overlooked the stative as one of the grammatical relation changing operations in these languages. For the purpose of this study, the grammatical relations changing constructions that involve passive and stative morphemes, and locative inversion constructions in Bantu languages are considered in this chapter for the reason that these operations relate to the argument alternation constructions and the notion of causation analyzed in this study (cf. chapters 5 & 6).

4.3 General remarks on the passive and the stative constructions

Across languages passive and stative verb constructions are interrelated in various ways and both are often characterized as intransitives (see Tallerman 2015). Tallerman observes that in most languages the structure of the passive and the stative constructions are superficially similar, as (138) demonstrates.

- | | | | |
|-------|----|--|----------------|
| (138) | a. | The police surrounded the village | active |
| | b. | The village was surrounded by the police | passive |
| | c. | The village was surrounded | stative |

The examples in (138) demonstrate that the passive sentence in (138b), and the stative in (138c) are similar in that ‘the village’ which is the grammatical subject of the two constructions are patient/theme, which is the logical object of their active counterpart in (138a). Furthermore, the two constructions indicate that passive and stative verb sentences share another similarity in that they both lack an external argument, the DP subject ‘the police’ in (138a). Although (138b) and (138c) share some properties, they are also different in that, in (138b), the agent of the action denoted by the verb can be expressed in an oblique (prepositional) phrase (i.e. by the police). Generally, (138b) gives evidence that passives involve an agent of action which may be overtly or covertly expressed, whereas the stative constructions do not, as (138c) demonstrates.

The passive verb construction has been compared to the stative and several other constructions such as the reciprocal, potential, and the reflexive (Dixon 1979; Givon 1979; Shibatani 1985; Baker 1988). These scholars observe that the relationship that characterizes these constructions can be accounted for in terms of agentive properties. It has been established that in the passive, stative, reciprocal, potential and reflexive constructions, the expression of an agent external argument is constrained, however, in different ways. Shibatani in particular points out that unlike other related constructions, pragmatically, passive functions as agent defocusing. The scholar states that the prototype passive has distinct features which differentiate it from the rest of other related constructions, as listed in (139) (Shibatani 1985:837).

- (139) **Primary characteristics of the passive prototype**
- a. Primary pragmatic function: Defocusing of agent
 - b. Semantic properties:
 - (i) Semantic valency: predicate (agent, patient)

- (ii) Subject is affected
- c. Syntactic properties
 - (i) Syntactic encoding: agent → \emptyset (not encoded)
 - Patient → subject
 - (ii) Valence of predicate: active = P/n
 - Passive = P/n-1
- d. Morphological property:
 - Active = P
 - Passive = P[+passive]

Shibatani (1985) asserts that although passive verb constructions and other related forms such as the middle passive (stative) are similar in various respects, the two constructions are semantically different. He argues that in the prototype passive, an agent is part of the semantic valency, but in stative constructions no agent is encoded semantically or syntactically. Generally, the prototype passive verb construction is distinct from the stative verb construction in that the passive is semantically transitive by virtue of having both agent and patient, whereas the stative verb is basically intransitive, both syntactically and semantically.

4.4 Passive and stative verb constructions in Bantu

In Bantu languages passive and stative verb constructions are among processes that alter the grammatical relations of the sentence (cf. Rugemalira 1993; Mkude 1995). These processes are achieved by affixing specific suffixes, commonly recognized as extensions.

In Bantu languages there are two allomorphs for Proto-Bantu (PB) passive morphemes: the suffix **-u-* which occurs after consonant stems, and **-ibu-* occurring after vowels (Schadeberg 2003). However, in many Bantu languages, passives are formed by the post-radical or pre-final suffix morpheme *-w-*, *-ew-*, *-iw-* or *-ibw-*, and in few cases by *-o-*, (for example in Kiwoso).

A generally held view is that syntactically, the passive in Bantu languages involves constructions in which the DP subject of an active sentence is demoted to an oblique (prepositional) phrase, or it is not expressed at all, hence implicit. The DP object is promoted to the grammatical subject status (see for example, Kula & Marten 2010). This property motivates the comparative analysis of passive construction with other related structures explored in this study.

In relation to stative forms, Schadeberg (2003) states that, unlike passive morphemes, the stative suffix is poorly represented in Proto Bantu (PB) reconstructions. This extension is indicated by **-ik-* (in Proto-Bantu). However, it has been observed that stative morphology varies across and within individual languages (Lothi 2002). Also, the terms employed to refer to stative morpheme differ considerably (see sections 4.5.3 and 4.5.2). Verbs suffixed with the stative morpheme have been differently described as stative, intransitive, neuter, neuter-passive, agentless passive, quasi-passive, neuter-stative, metastatic-potential, and descriptive passive (cf. Mchombo 1993; Dubinsky & Simango 1996; Bentley & Kulemeka 2001; Lothi 2002; Seidl & Dimitriadis 2003; Khumalo 2009). Mchombo in particular argues that the various labels associated with the stative verb suffix indicates the imprecise views on the nature of this morpheme across languages. Following Mchombo (1993), and for the purposes of simplicity, the label stative will be used throughout this work to refer to the constructions derived by the suffix *-k-*, *-ik-*, or *-ek-*. The term stative is also preferred because it has featured widely in the literature compared to other terms.

Canonically, the stative suffixes in Bantu languages are affixed to a transitive change of state verbs and as a result, the agent subject of the base verb is completely eliminated and the object expression occurs in the subject position (Dubinsky & Simango 1996; Lothi 2002; Seidl & Dimitriadis 2003; Khumalo 2009). These scholars maintain that when the stative suffix is affixed to the base verb, the DP subject is completely eliminated from the syntactic structure of the stative constructions.

Schadeberg (2003:75) states that verbs with a stative suffix in Bantu languages indicate that the subject is potentially or factually affected by the action expressed by the verb. He further argues that the variation in the interpretation, that is, the potential and the process-or-state interpretations, may be associated with the aspectual meaning of the particular inflectional category of the verbal form, or else the context in which the verb is used. He emphasizes that in the stative constructions there is no agent either expressed or implied, thus an agent is basically absent. Generally, views on the meaning of stative vary among scholars, as shown in sections 4.5.3 and 4.6.2. However, in most cases the stative is viewed to denote a non-dynamic state of affairs, and it expresses existence, condition or a state rather than an action.

Generally, it has been shown that passive and stative verb constructions are among grammatical relation changing constructions in Bantu languages, and that the two operations share some morphological and syntactic features, although they are clearly distinct semantically. Whereas an agent in passive constructions is semantically implied, the stative constructions do not involve the conceptualization of an agent. Passive and stative verb forms are examined in this chapter for the

reason that they relate to argument alternations properties explored in this study (cf. chapter 5). The following sections are devoted to a discussion of the passive and the stative constructions in different Bantu languages.

4.5 Viewpoints from descriptive Bantu grammarians on the passive and stative verb constructions

It has been pointed out in the introduction that the studies reviewed on passives and statives in Bantu languages are not exhaustive for the reason that some Bantu languages have been well documented, while others have not. Thus, the earlier grammarians such as Sanderson (1922) (Yao [P21]), Doke (1945) (Zulu [S42]), Morrison (1930) (Baluba-lulua [L31]), Ashton (1947) (Swahili), Ziervogel and Litt (1952) (siSwati [S43]), Ashton et al. (1954) (Luganda [JE15]), Cole (1955) (Tswana [S31]), Doke and Mofokeng (1957) (Southern Sotho [S33]), and Baumbach (1987) (Tsongo [S53]) will be reviewed in this section. The more current grammars by Poulos and Msimang (1998) (Zulu [S42]), Ngonyani (2003) (Chingoni [N12]), Rugemalira (2005) (Runyambo [JE21]), Asheli (2013) (Shinyiha [M23]), Mathayo (2013) (Shimwera [P22]) and Rugemalira (2014) (Chigogo [G11]) will receive attention in relation to reviewing research on the passive and stative verb constructions. Earlier and the current perspectives are considered for the purpose of establishing a full understanding of morphosyntax and semantics of the passive and stative suffixes in relation to grammatical relation changing properties. It is also important to consider both earlier and current views because the earlier grammarians were mostly missionaries who might have analyzed linguistic forms without having formal linguistic knowledge. The current grammars are mostly written by linguists, thus considering the two sides brings clear understanding of the passive and the stative constructions in these languages.

4.5.1 General overview

In the last century, the missionaries and the practitioners of Bantu languages produced a number of descriptive grammars that outlined, among other things, the behaviour of verbal extensions in Bantu languages. It has been observed that most of earlier grammars in these languages are based in Southern Bantu, and Doke (1927/1945, 1943) has been accredited a forefather of the vast majority of Southern Bantu linguistic descriptions of the present day. Matambirofa (2003) has observed that most of the descriptive grammars in Southern Bantu languages have adopted the Dokean descriptive approach (cf. Fortune 1955, 1957, 1980; Nyembezi 1973; Taljaard & Bosch 1993). Apart from the strong base laid by the missionaries and other pioneers of language documentation, there are current

descriptive grammars in different languages from different linguists which seem to differ from the earlier approaches, particularly in terms of the analysis of linguistic forms although they are considerably similar in terms of content. Similarly to the earlier grammar works in Bantu languages, the current descriptive grammars have extensively discussed the notion of verbal extensions including the passive and the stative suffixes with respect to their morphology and semantics (cf. Ngonyani 2003; Rugemalira 2005, 2014, among others). However, Kiwoso is scantily documented and lacks scholarly sources such as descriptive grammar texts. For this reason an outline overview about the descriptive grammar of Kiwoso has been presented in chapter 2 to enable readers to follow the presented data and discussion in the subsequent chapters. The following section presents the perspectives of various earlier descriptive grammarians on the passive and the stative verb constructions in Bantu languages with regard to their morphology, syntax, and semantics.

4.5.2. Earlier grammarians' perspectives on passive verb constructions

In his descriptive grammar of Yao [P21], Sanderson (1922) states that the passive is hardly used. He asserts that, on rare occasions, Yao speakers use the formative suffix *-w-* or *-ilw-* to express passives, as can be illustrated in *kutuma* 'to send', *kutumwa* 'to be sent', *kulaga* 'to kill' *kuulajilwa* 'to be killed'. Although he does not provide any detail about the passive constructions, his examples show the prototype passive morphology in Bantu languages, and the general characteristic that the passive construction has an implication of an agent argument (see section 4.4).

In the descriptive textbook of Zulu grammar, Doke (1945) pointed out that verbs in Zulu [S42] may be extended by means of suffixes to derive new forms with different meanings. He states that the passive and the neuter are the two most important regular verbal derivatives in Zulu. Doke identified two productive passive suffixes in Zulu: The morpheme *-w-* attached before the final vowel of the verb stem as appears in verbs such as *thanda* 'love' > *thandwa* 'be loved' and *shaya* 'strike' > *shaywa* 'be struck'; and the suffix *-iw-* used with monosyllabic and disyllabic vowel verb stems, as in *pha* 'give' > *phiwa*, 'be given' *thi* 'say' > *thiwa* 'be said', and *enza* 'make' *enziwa* 'be made'). Doke states that the passive constructions in Zulu indicate that the subject is acted upon by an agent and that there is always the implication of an agent of the action. He shows that this agent phrase is realized as an agentive adverb in the form of a copulative, as (140) illustrates (Doke 1945:136).

- (140) a. *nga:shywa yitshe* 'it was struck by a stone; lit. I was struck, it is a stone'
 b. *izinto ezifunwa ngabantu* 'things which are wanted by people'

The passive constructions in (140) demonstrate that the copulatives *yitshe* ‘it is a stone’ and *ngabantu* ‘it is people’ are used as an agentive phrase in Zulu to express an agent of action which is always implied in Zulu passive verb constructions just like in other Bantu languages (cf. section 4.3). Doke also pointed out that passives in Zulu can be formed from other derivative verbs such as applicative verbs, as in *thandela* ‘love for’ >*thandelwa*), reciprocal (e.g., *thandana* ‘love one another’ >*thandanwa*), and causative verb (e.g., *thandisa* ‘cause to love’ >*thandiswa*). Generally, Doke shows that passive morphemes in Zulu can co-occur with other verbal extensions as is generally the case in many Bantu languages in which passive verb co-occur with various other suffixes (cf. Hyman 2003a).

In his description of passive constructions in Buluba-lulua [L31], Morrison (1930) distinguished three forms of voices, namely active, middle and passive voice. Morrison (1930) asserts that the passive constructions are disfavored in Buluba-lulua. To avoid passive forms, speakers tend to employ the indefinite third person plural active voice for expressing passive voice. He asserts that in the passive voice constructions, the agent may or may not be expressed, and when mentioned, it should be followed by the prepositional word *kudi* ‘by’, as in *bakushiha mbushi* ‘the goat has been killed’ (lit. they have killed the goat) and *bakushiha mbushi kudi Kasongo* ‘The goat has been killed by Kasongo’, respectively.

Morrison points out that the passive constructions in Buluba-lulua can also be derived by suffixing the morpheme *-ibua* to the verb root. He states that passive construction formed by the use of the suffix *-ibua* has the regular active voice inflection, as in *udi utahibua* ‘he is being struck’, *neatahibue* ‘he will be struck’, and *udi mutahibue* ‘he has been struck’ (Morrison 1930: 70). Generally, the passive suffix *-ibua* in Buluba-lulua parallels the passive suffixes *-w-* and *-iw-/ew-*, found in many Bantu languages (see section 4.4).

Ashton (1947) observed that in Swahili [G40], passive constructions may be formed mostly from simple verbs but also from other derived verb forms. Ashton identified different passive suffixes in Swahili, namely *-w-*, *-iw-*, *-ew-*, *-liw-*, and *-lew-*. He pointed out that the form of the passive suffix in Swahili is determined, on the one hand, by the number of vowels at the end of the verb, and by the rules of vowel harmony, on the other hand. Ashton’s examples illustrate that verbs that end with single vowel take the suffix *-w-* (e.g., *kata* ‘cut’ >*katwa*), while verbs that end with two vowels take *-liw-* or *-lew-* (e.g., *chukua* ‘carry’ >*chukuliwa*, *ondoa* ‘take away’ >*ondolewa*). Additionally, monosyllabic verbs and verbs of Arabic origin take *-iw-* or *-ew-* (for example *jibu* ‘answer’ *jibiwa*, *samehe* ‘forgive’ *samehewa*).

He argues that whether the passive constructions are derived from simple verbs (141) or from the derived verbs (142), the object of the active verb is always promoted to the subject position of the passive counterpart, as examples (141) and (142) demonstrate (Ashton 1947:224).

- (141) a. *Hamisi alipika chakula*
Hamisi a- li- pik- a chakula
 Hamisi AGRs-PST- cook- FV 7food
 ‘Hamisi cooked some food’
- b. *chakula kilipikwa na Hamisi*
chakula ki- li- pik- w- a na Hamisi
 7food 7AGRo-PST- cook- PASS- FV by Hamisi
 ‘The food was cooked by Hamisi’
- (142) a. *Hamisi alinipikia chakula*
Hamisi a- li- ni- pik- i- a chakula
 Hamis AGRs-PST- OM- cook- APPL- FV 7food
 ‘Hamisi cooked me some food’
- b. *Nilipikiwa chakula na Hamisi*
ni- li- pik- i- w- a chakula na Hamisi
 1SG-PST- cook- APPL- PASS- FV 7food by Hamis
 ‘Food was cooked for me by Hamisi’

Although Ashton does not state it explicitly, his examples demonstrate that the passive construction in Swahili involves an implicit agent phrase which is introduced by *na*-phrase ‘by-phrase’, as evidenced in (141b) and (142b). The subject *Hamisi* in (141a) has been suppressed to an oblique phrase in (141b), and the object *chakula* ‘food’ has been promoted to the grammatical subject in (141a). Similar effect can be observed in the prepositional (derived) verb *kupikia* ‘to cook for’ in (142), where the object *ni* (me) in (142b) becomes the subject *ni* ‘I’ of the prepositional passive *kupikiwa* ‘to be cooked for’.

In their analysis of the siSwati grammatical structure, Ziervogel and Litt (1952) assert that passive formatives in siSwati [S43] differ with respect to the nature of the syllable. They pointed out that monosyllabic and disyllabic verbs take the passive form *-iw* (e.g., *dliwa* from *dla* ‘eat’ and *atiwa* from *tiwa* ‘know’). By contrast, disyllabic and polysyllabic verbs take the suffix *-w* (e.g., *valwa* from *val*

‘close’ and *jikijelwa* from *jikijela* ‘throw’). Ziervogel and Litt’s (1952) description of the passive constructions in siSwati is not illustrative enough because they did not include the interpretation of the passive forms for the readers to distinguish the active form of the verb and its passive counterpart, thus it is difficult for the reader to understand the effects of passive suffixes in the sentence structure.

Ashton, Mulira and Tucker (1954) wrote a descriptive grammar for Luganda [JE15]. These scholars state that passive forms are not widely used in Luganda, but when employed, the suffixes *-ibw* or *-ebw* (following the rules of vowel harmony) are attached to the verb root. They point out that the forms *-ibw* and *-ebw* have been modified as *-iddw/-eddw*, which alternate with the form *-ibbw/-ebbw*, respectively. Ashton, Mulira and Tucker (1954:335) provide instances of the passive forms in Luganda, as presented in (143).

(143) basic form	passive form	modified form
<i>leeta</i> ‘bring’	<i>leetebwa</i>	<i>leeteddwa /leetebbwa</i>
<i>sig</i> ‘sow’	<i>sigibwa</i>	<i>sigiddwa /sigibbwa</i>

They also demonstrate that some verbs that end with *-ba*, *-ma*, *-pa*, or *-la* form passive by suffixing the morpheme *-w-*, with *-ibw* or *-ebw* as alternative forms with some verbs, and the modified versions as *-iddw* or *-eddw* and *-ibbw* or *-ebbw*, as presented in (144).

(144) Simple form	passive form	modified form
<i>laba</i> ‘see’	<i>labwa/labibwa</i>	<i>labiddwa/labibbwa</i>
<i>sala</i> ‘cut’	<i>salwa/salibwa</i>	<i>saliddwa/salibbwa</i>

Ashton, Mulira and Tucker (1954) maintain that passive forms in Luganda are only used when the speaker needs to express contrastive focus. It can be noted that similarly to Ziervogel and Litt (1952), Ashton, Mulira and Tucker (1954) did not offer a clear discussion of the interpretation of the passive forms in Luganda. In addition, unlike many Bantu languages, Luganda lacks a special particle that introduces the agent or instrument noun in the passive constructions, as instances such as *yakubibwa Mukasa* ‘he was struck by Mukasa’ and *Yattibwa ffumu* ‘he was killed by a spear’ demonstrate.

Cole (1955) pointed out that the passive construction is widely used in Tswana [S31], and it is formed by suffixing the morpheme *-w-/-iw-*. He states that passive construction denotes an implication of the existence of the external force or agency that act upon the subject of the verb. He maintains that in passive constructions, the agent of the verbal action is always implied, even when it is not explicitly

stated. Furthermore, when the agent is explicitly expressed, it takes the form of an agentive adverb with the prefixal formative *ke-*, as in *dipodi direkwa kenna* ‘the goats are being bought by me’ and *otlalongwa kentsa* ‘you will be bitten by the dog’

Note that similarly to Zulu and Swahili, the agent of an action expressed by the verb is always realized in Tswana through prefixal formative (preposition-like element) which is comparable to the agentive adverb phrase in Zulu and the prepositional element *na* ‘by’ in Swahili.

Doke and Mofokeng (1957) state that passive and stative are among the most productive, regular and extensively used verbal derivatives in Sotho [S33]. They argue that the passive verb construction is derived by suffixing the morpheme *-oa/-oe* or *-eoa/-ooa/-uoa*, depending on the final vowel of the verbal stems. These scholars assert that when passive formatives are suffixed to the verbal root they indicate that the subject is acted upon by an agent which is introduced by an agentive adverb. They point out that the agentive adverb in Sotho is formed by the copulative prefix *ke-* attached to the noun or pronoun, as in *reratoa kentate* ‘we are loved by our father’, *likhomo liile tsabonoa keron* ‘the cattle were seen by us’. Notice that similarly to other Bantu languages reviewed in this section, Sotho passives realize an implicit agent argument which is introduced by an agentive adverb in form of prefix *ke-* (cf. Cole 1955).

In his analytical grammar of Tsonga [S53], Baumbach (1987) demonstrates that the passive verb form is derived by suffixing *-iw-* to the verbal root. Baumbach states that the passive construction in Tsonga entails that the grammatical subject undergoes the action or process expressed by the verb rather than performing the process or the action. He asserts that in the passive constructions, the agent which executes the action is preceded by the instrumental formative *hi*. He further argues that when this instrumental formative is employed, the verb is used in its basic verb without adding the passive suffix *-iw-*, as in *va ta luma hi mbyana* ‘they will be bitten by the dog’, and *thicara u ta pfuna hiRisenga* ‘the teacher will be helped by Risenga’.

Needless to say, Tsonga’s passive construction is unique compared to the rest of the studies reviewed in that, whenever instrumental formative *hi* is used, the passive suffixes are not used. The scholar is in a way suggesting that such formative and the passive suffixes in Tsonga are in complementary distribution. This is contrary to many Bantu languages, particularly the ones reviewed in this section which commonly employ both forms, as evidenced for Zulu, Swahili and other languages.

According to the earlier grammarians, the passive construction in Bantu languages involves a grammatical relation changing operation in that the DP object argument of an active sentence

becomes the subject of the passive clause. The studies reviewed indicate that the passive construction contains an implicit agent argument which is semantically understood, and also can be introduced in the syntax through an agentive phrase, as this section demonstrates.

4.5.3 Earlier grammarians' perspectives on the stative constructions

Sanderson (1922) regards stative verbs in Yao has some forms of passive which do not make any reference to the agent responsible for the action expressed by the verb. He asserts that these forms of passive are achieved by suffixing *-ik-*, *-ek-*, or *-uk-*, as in *kuwoneka* 'to be visible' from *kuwona* 'to see', *kupapuka* 'to be torn' from *kupapula* 'to tear'. He furthermore states that the form of stative achieved by suffixing the morphemes *-ik-*, *-ek-*, and *-uk-* can be interpreted as the state which is potential rather than actual, as observed in *kuwalanjila* 'to be countable' from *kuwalanga* 'to count'.

Although Sanderson regards stative forms as a kind of agentless passive, his examples demonstrate typical characteristics of stative forms found across Bantu languages in that, like many other languages reviewed in this section, the stative suffixes in Yao have multiple interpretations such as an ability or possibility reading as well as a potential reading, as his examples demonstrate. Therefore, labelling these constructions as agentless passives is inappropriate because not only that the stative verb constructions differ from passive in terms of agentivity but also in terms of their morphology, syntax, and semantics.

It has been pointed out earlier in this chapter that stative suffixes have been labelled differently by different scholars. Doke (1945) in particular labelled the stative forms as neuter, but he also recognizes other labels such as middle or quasi-passive. He pointed out that the stative construction in Zulu is formed by two distinct suffixes, namely *-eka* and *-akala*. He, however, states that, there is no difference between the two forms in terms of interpretation or significance with regard to stative verb constructions in Zulu. His examples with the form *-ek-* are as appear in *shiseka* 'get burnt', *fundeka* 'be readable', and *hlanzeka* 'be clean'. On the other hand Doke provides the instances of Zulu verbs which take *-akala* (for example *thola>tholakala* 'get picked up', *zwa>zwakala* 'be audible'). The scholar maintains that other verbs can take either *-ek-*, or *-akal-* (for example *siza>sizeka* or *sizakala* 'get help', *khola>kholeka* or *kholakala* 'be satisfactory').

Doke (1945) pointed out that in most cases, the stative form in Zulu carries the force of English suffix '-able' or '-ible', but other state verb forms have 'get' or 'become' reading distinct from the passive reading, 'be'. He argues that the stative verb construction in Zulu indicates an intransitive state or condition without specific reference to the agent that determines such condition or state.

Generally, Doke's description of passive and stative verb constructions suggests that the major difference between passives and statives in Zulu is the presence of the implied agent in the former and lack of it in the latter, as also observed in other Bantu languages. Although the approach used in Doke (1945) seems to be influenced by the traditional European grammar model, it should be noted that Doke has put forward the general interpretations of the passive and the stative constructions in Zulu which indicate the clear distinction between the two forms.

Working on Buluba-lulua, Morrison (1930) asserts that stative constructions are formed by attaching the suffixes *-uk-*, *-ik-*, *-ek-*, *-ok-* or *-m-*. He argues that when these suffixes are added to the verb roots, the verbs achieve new forms coupled with new interpretations that correspond to the middle voice idea of the Greek. Morrison states further that in Buluba-lulua, a few cases occur of verbs with the stative suffixes *-ek-/ok-* with an inchoative meaning, as in words such as *oneka onoka* 'to become corrupt' derived from the verb *ona* 'to corrupt' and *mueneka* 'to become seen', (i.e., to appear) from the verb *mona* 'to see'.

Morrison pointed out that the derived form is neither active in the sense of its subject performing an act, nor passive in the sense of its subject being the recipient of an act from anything external, but it is between the two, as the examples in (145) illustrate.

- | | | | |
|-------|----|-------------------------------|-----------------------------|
| (145) | a. | <i>wakutshibula mutshi</i> | ‘he broke the stick’ |
| | b. | <i>mutshi wakutshibuka</i> | ‘the stick has broken’ |
| | c. | <i>mutshi wakutshibudibua</i> | ‘the stick has been broken’ |

Morrison is of the view that, the state form in (145b) implies that an internal agent exists, or that the condition or state may occur spontaneously, that is without intervention of anything external. The stative construction in (145b), unlike its active and passive counterparts in (145a), and (145c), respectively expresses an active condition or state or result, which is attributed to the subject itself. Morrison labels the derived form neuter or stative, or middle voice.

Ashton (1947) identified *-ik-*, *-ek-* and *-lik-* in Swahili as the suffixes of stative (or neuter) verbs. He asserts that, like the suffixes of the passive forms, the stative verbs' suffixes are subject to the principles of vowel harmony. He argues that stative verb constructions express state without reference to agency. Ashton's observation suggests that the agent of an action is absent in Swahili stative verb constructions, contrary to passives in which the agent is always implied, as examples in (146) illustrate (Ashton 1947: 227).

- (146) a. *kikombe kimevunjika*
kikombe ki- me- vunj- ik- a
 7cup 7AGRs-PRES-break- STAT-FV
 ‘The cup is broken’
- b. *kikombe kilivunjwa na Hamis*
kikombe ki- li- vunj- w- a na Hamis
 7cup AGRs-PST- break- PASS-FV by Hamis
 ‘The cup was broken by Hamisi’

Stative verb construction in (146a) indicates the state, with no agency implied at all, whereas the passive verb construction in (146b), expresses an agent of the action denoted by the verb via the oblique (preposition phrase) phrase *na Hamisi*.

This scholar pointed out that apart from indicating state or condition, stative verb constructions in Swahili express potentiality, that is, whether or not the subject is capable of undergoing a given action, as in sentences *kazi hii inafanyika* ‘this work is capable of being done or can be done’, and *kazi hii haifanyiki* ‘this work can’t be done’. Ashton postulates that the stative suffix in Swahili can be used in middle constructions, as in *nguo hii haifai, yapasulika* ‘this cloth is useless, it tears easily, or, it gets easily torn’. It has been demonstrated that across Bantu languages, the stative suffix has multiple roles. Statives can indicate potentiality, ability, an inchoative, and a middle meaning.

Ziervogel and Litt (1952) pointed out that stative construction in siSwati is realized by attaching the suffixes *-ek-*, *-ik-*, and *-akal-*. They argue that these suffixes are intransitives which denote an ability to be in a certain state. They maintained that verbs with such suffixes can be interpreted as ‘able’ or ‘ible’, or ‘get’ depending on the circumstance and the nature of the verb in which they are suffixed. Ziervogel and Litt provide examples such as *tsandzeka* ‘lovable’ or ‘likable’ and *ehlika* ‘get down’, *funeka/funekala* ‘be desirable’ from *funa* ‘desire’ and *oneka/onakala* ‘get spoilt’ from *ona* ‘spoil’.

Ziervogel and Litt (1952) demonstrated that like many Bantu languages, siSwati stative expressions have multiple interpretations and the statives in this languages denote a state or condition in which the subject occurs, or a resultant state which is denoted by the ‘become’ or ‘get’ meaning, generally recognized as an inchoative meaning.

In their descriptive Luganda grammar, Ashton, Mulira and Tucker (1954) pointed out that in Luganda the stative construction is expressed by suffixing *-ik-*, *-ek-*, *-uk-* or *-ok-* (subject to vowel harmony rule). They illustrate that when these forms are used with simple verb forms in intransitive verbs, they can be interpreted as ‘the possibility or capability of the action of the simple verb to be put in motion’. These scholars provide examples as *okuliika* ‘to be edible’, and *okunyweka* ‘to be potable’. They assert that the stative construction in Luganda indicates that an agent of the action indicated by the verb is excluded from the action. Apart from the possibility or capability interpretation, stative verbs in this language may have an inchoative reading, as evidenced in example sentences like *okuzibuka* ‘to become unstopped’, *okutamiirukuka* ‘to become sober’.

Cole (1955) pointed out that there are four different forms of stative suffix in Tswana. These are *-eg-*, *-al-*, *-afal-* or *agal-*, and *-akal-*. He argues that the four suffixes are used in different verb roots and that no stem can assume all four suffixes. He, however, points out that there are few stative verb suffixes which may assume two to three with trivial differences in terms of significance. He mentioned that the most common type of stative formation in Tswana is derived by attaching the suffix *-eg-* as found in words such as *jega* ‘become eaten away/ be edible’ from the basic form *ja* ‘eat’, and *ratega* ‘loved/be lovable’ from *rata* ‘love’.

Cole states that the form *-al-* occurs in few stems including *bonala* ‘be visible, or ‘become seen’ from *bona* ‘see’, and *onala* ‘become old, worn out’. Cole asserts that to a lesser extent though uncommon, the stative constructions in Tswana are also formed by the suffix *-afal-* or *agal-*. He pointed out that these forms are subject to dialectal variation, and that *-alaf-* is widely used in the southern dialects, as in *lelafala* ‘become very hot’, while *-agal-* occurs in few forms only as an alternative in the central and the northern dialects, as in *diragala* ‘become done/happen/come to pass’.

Cole identified yet another compound stative suffix forms, namely *-eseg-* and *-yeg-*. He argues that these forms are peculiar in that they are mostly used with derivative stems contrary to *-eg-*, *-al-*, and *-afal-/agal-* which occur mainly with primitive stems. Instances of stative verb forms including *dumelesega* ‘be agreeable/believable/credible’, and *bonalesega* ‘be visible/exposed to view’. Generally, like other languages reviewed so far, Tswana distinguishes stative forms from passive in terms of the properties of agentivity. However, the varied nature of stative interpretations across Bantu has also featured in Tswana stative suffixes.

Doke and Mofokeng (1957) state that the stative construction in Sotho is formed by the detransitivizing suffixes *-eh-* and *-ahal-*. They assert that stative suffixes denote an intransitive state or condition without an indication of the agent that determines the state or condition expressed by the

verb. They assert that when stative suffixes are incorporated in the verb, the meaning acquired can be associated to the meaning of the English suffix ‘able’ or ‘ible’, or else the verbs acquire the inchoative meaning, that is ‘get’ or ‘become’ interpretation, as in *thipaeaka erobihike* ‘my knife is broken’. These scholars assert that stative verb constructions denotes the state as happening spontaneously without anything external causing the state or condition, thus an agent is absent in stative sentences.

Baumbach (1987) states that the stative forms in Tsonga are indicated by the suffixes *-ek-* and *-akal-*. He asserts that the stative suffixes indicate that the grammatical subject of the verb is in an intransitive condition or state. He pointed out that the stative suffixes in Tsongo can be interpreted as ‘able’ or ‘worthy’, as seen in *rhandzeka* ‘be lovable’ from the basic form *rhandza* ‘love’, and *dzuneka* ‘be praiseworthy’ from *dzuna* ‘praise’. Baumbach further noted that the stative forms in Tsonga indicate that the grammatical subject has undergone a transitional process, thus expressing transitive state or condition as in *herheka* ‘be warped/bend/twisted’ from the basic form *herha* ‘bend/twist’.

He asserts that for certain verbs, the stative construction in Tsonga is indicated by the suffix *-akal/al-* but not *-ek-*, as appears in words such as *twakala* ‘be audible/perceptible’, and *fihlakala* ‘have possibility to be hidden’. He argues that the stative form *-al-* is treated as inchoative marker, in that when attached to a verb, it denotes resultative (becoming) condition or state (Baumbach 1987:206).

This section has dealt with the stative constructions in Bantu languages as presented in the earlier grammars of some of the Bantu languages. The studies reviewed demonstrate that stative suffixes in Bantu languages are not easy to characterize for the reason that verbs derived by means of stative suffixes have multiple interpretations. Verbs derived through stative suffixes acquire different semantic nuances such as potentiality, inchoative, possibility/ability, and middle interpretation, as the studies reviewed in this section indicate. However, stative suffixes generally denote the intransitive state or condition expressed by the verb. The present study explores the properties of change of state and change of location/position verbs in argument alternations such as anticausatives, passives, and dispositional middles. The properties of passive and stative suffixes reviewed in this chapter provide insights concerning the properties of these morphemes in argument alternations in Kiwoso, as explored in this thesis.

4.6. Views on passive and stative constructions in the recent descriptive grammars

The previous section presented the description and the analysis of the passive and the stative constructions on the perspectives of the earlier Bantu grammarians. Most of the earlier grammarians were missionaries some with limited background in linguistics. This section is devoted to discussing

passive and stative constructions based on the views of the current Bantu linguists. Unlike the former grammarians who often were not professional linguists, recent grammars in Bantu languages are written by linguists. In this section, the passive and the stative constructions as presented and described in the current grammars of Zulu, Chingoni, Runyambo, Shimwela, Shinyiha, and Chigogo will be discussed, and the general remarks on the passive and the stative constructions based on the earlier and the recent grammars will be made at the end of this section.

4.6.1 Viewpoints on passive constructions from the recent descriptive grammars

In their recent grammar on Zulu [S42], Poulos and Msimang (1998) state that passive is one of the regular and productive extensions which appears in the form of the suffixes *-w-* or *-iw-*, depending on the type of the verb root, as evidenced in *akhiwa* ‘be built’, *shiwa* ‘be said’, *boniwe* ‘be seen’ and *thengiwe* ‘be bought. They point out that the suffix *-w-* is applied to polysyllabic verb roots, as evidenced in *umalume welekelelwa nguNtokozo* ‘my uncle is being assisted by Ntokozo’. Generally, as also observed earlier by Doke (1945), the recent study in Zulu by Poulos and Msimang (1998) gives evidence that passive in Zulu, like in many Bantu languages, denotes an implicit agent responsible for the action expressed by the verb.

Ngonyani (2003) states that the passive construction in Chingoni [N12] is derived by affixing the suffix *-iw-* to a transitive verb. He argues that the addition of this extension morpheme results into the re-ordering of the logical subject and object in which the logical object expression occupies the subject position, an introduction of an optional oblique (*by*-phrase) introduces the logical subject in the post-verbal position. Ngonyani’s (2003:68).argument can be demonstrated in the following examples he provides, presented in (147).

- (147) a. *Komba amgegili Neema*
Komba a- m- gegil- i Neema
 Komba AGRs- AGRo-marry- PERF Neema
 ‘Komba has married Neema’
- b. *Neema agegiwi na Komba*
Neema a- gegi- w- i na Komba
 Neema AGRs- marry- PASS PERF by Komba
 ‘Neema is married to Komba’

The examples in (147) illustrate that the nouns, *Kombo* and *Neema* have been changed from one position to another, hence their grammatical relations have changed. It can be noted that in (147a), *Komba* is a subject, an agent of the action, whereas *Neema* is the patient, the object of an action. By contrast, the passive construction in (147b) shows that the agent of the action is now *Neema*, whereas *Komba*, the logical subject in active formation in (147a), is realized as an oblique phrase introduced by the agentive element *na*-phrase ‘by-phrase’. Generally, the grammatical relation changing property of passives is common across Bantu languages, as evidenced by examples from other languages reviewed in this chapter.

Ngonyani pointed out that despite the fact that passive morpheme give rise to the transposition of logical object to the position of subject, as also observed in stative formation, the two constructions are syntactically different. He argues that contrary to passives, statives do not allow the expression of logical subject, as examples from Chingoni demonstrate (cf. section 4.6.2).

In his sketch grammar of Runyambo [JE21], Rugemalira (2005) asserts that the passive construction in this language involves two forms: the short form *-w-*, and the long ones *-ibw-* or *-ebw-*. He asserts that passive suffixes are included verbal suffixes that reduce the valency of the verb. Rugemalira exemplifies passive constructions in Runyambo with sentences like *endimiro ekarimwa omukazi* ‘the field was cultivated by the woman’, and *ebitooce bikariibwa abaana* ‘the bananas were eaten by the children’.

Similarly to other Bantu languages, the examples of passive constructions in Runyambo denote the presence of an agent argument. However, unlike in research on Bantu languages generally, Runyambo does not identify any specific element that introduces implicit agent. This is similar to Luganda in which the passive forms express an agent argument without any specific particle that may be regarded as introducing this phrase.

In his sketch grammar of Shinyiha [M23], Ashel (2013) mentions that passive is realized by the morpheme *-w-*, which is basically attached to transitive verbs. He points out that such a morpheme can be attached to verbs such as *lima* ‘cultivate’ to derive the passive forms *limwa* ‘be cultivated’, *lya* ‘eat’ to *haveliwa* ‘be eaten’, and *tega* ‘trap’ to form ‘*tegwa*’ be trapped’.

In contrast to other previous scholars, (see Poulos & Msimang 1998; Ngonyani 2003; Rugemalira 2005), Ashel does not discuss either syntactic or semantic features associated with the passive forms. However, his examples indicate that the passive constructions in Shinyiha, as in most other Bantu languages, introduce an agent of the actions denoted by the verb.

In his unpublished grammar of Shimwela [P22], Mathayo (2014) states that the passive construction in this language is derived by suffixing the morpheme *-w-* to the verbal root. The examples in (148) are illustrative of passive constructions in Shimwela, as discussed by Mathayo (2014:83).

- (148) a. *balua jishinkujaandikwa ukoto*
balua ji- shi- nku- jaandik-w- a ukoto
 9letter 9AGRs-PST- INF- write- PASS- FV well
 ‘The letter was well-written’
- b. *ashinkukomwa na akwaabhe*
a- shi- nku- kom- w- a na akwaabhe
 3SG- PST- INF- hit- PASS- FV by her mother
 ‘He/she was beaten by her mother’

The examples in (148) illustrate that, as generally in Bantu languages, passive constructions in Shimwela contain an agent argument responsible for the action described in the sentences. In example (148a), the agent is not overtly expressed but it is semantically implied. In (148b) the agent is overtly expressed and like most other Bantu languages, the agent DP in Shimwela is introduced by *na*-phrase ‘by-phrase’, in this case, the phrase *na akwaabhe* ‘by her mother’.

Most recently, Rugemalira (2014) wrote a descriptive grammar for Chigogo [G11]. He states that passive construction in Chigogo is formed by two different affixes depending on whether the verb stem ends with a vowel or a consonant. He asserts that the general form is the suffix *-w-* which can be attached to transitive verb to derive the passive forms. He, however, states that Chigogo uses the passive suffix *-igw-* whenever the stem of the verb end with a vowel sound. The two passive affixes (*-w-*) and (*-igw-*) in Chigogo, are as occur in *telekwa* ‘be cooked’, *wopwa* ‘be closed’, and *zuigwa* ‘be weeded’.

Rugemalira pointed out that the passive constructions in Chigogo alter the grammatical relation of the participants. He argues that in passive constructions the logical object expression takes the position of subject and the logical subject is suppressed, as in sentences *mugunda walimwa na walume* ‘the field was cultivated by men’, and *kaya yazengwa na wafungwa* ‘the house was built by the prisoners’. Rugemalira asserts that *na walume* ‘by men’ and *na wafungwa* ‘by prisoners’ are logical subjects in active form of the verb which have been suppressed to oblique phrases in the passive constructions.

The descriptions of the passive constructions in Bantu languages based on the current descriptive grammars and the earlier studies (see section 4.4.2) have shown that one of the major roles of the passive constructions is that of backgrounding or deemphasizing the agent without affecting the argument structure of the verb. The passive construction is viewed not to affect the verb's argument structure because whether languages express an agent argument overtly or covertly, this argument is implied in passive verb constructions in Bantu languages, generally.

4.6.2 Perspectives on the stative constructions from the recent Bantu grammars

This section is devoted to a discussion of the stative forms in Bantu languages with reference to the current grammarians' views for the characteristics of the stative constructions. This section on statives reviews the same studies referred to in section 4.6.1 on the passive constructions.

In the descriptive grammar of Zulu, Poulos and Msimang (1998) pointed out that stative construction is derived by suffixing, following their term, the neuter suffix *-ek-*, or *-akal-*, to the verbs. They state that suffix form *-ek-* is equivalent to the English suffixes 'able' or 'ible'. These linguists illustrate that when the stative form *-ek-* is suffixed to the verb root *-dl-* 'eat' in Zulu, the stative form *-dlek-* 'be edible' is derived. They maintain that such a construction can be interpreted as something that can be eaten or has the potential to be eaten (Poulos & Msimang 1998:193). They argue that there are some forms of the verbal root with the stative extension *-ek-* that may not be translated by the English -ible/-able, for example *-vulek-* 'be open' from *vul-* 'open'. They state that the stative form *-vulek-* refers to the opening of something like a door, however, without an implication of an agent of the action.

Poulos and Msimang (1998) thus suggest that, unlike passive constructions in which an agent is expressed, in stative verb constructions, the agent is neither syntactically expressed nor semantically implied in Zulu. This view is also expressed by Doke (1945) (see section 4.6.3).

Apart from the verbal suffix *-ek-*, these scholars observed that the stative construction in Zulu can also be derived by attaching the suffix morpheme *-akal-*. They state that, in some instances, roots that incorporate this extension express a similar significance to that of *-ek-* (i.e. they have ability or potential reading), but in other cases they may express a process resulting in some state ('become' or 'get' interpretation) as in *-onakal-* 'become/get spoil'. They further demonstrate that constructions with the stative suffix *-akal-* in Zulu can also be interpreted as denoting the actual state or condition, as in *bonakal* 'be visible, or seem'. It has been evidenced that like in many Bantu languages, stative

constructions in Zulu have multiple interpretations, that is ability or potentiality readings, and an inchoative (become/get) interpretation.

Ngonyani (2003) pointed out that the stative in Chingoni is formed by affixing the affix *-ik-* to a transitive verb as a result of which the logical subject of the non-stative (basic) verb gets eliminated and the logical object expression gets promoted to the subject position. He argues that stative verb constructions can be interpreted as a state resulting from the action denoted by a verb, or the event denoted by such a verb is in the process of becoming a state, as exemplified in (149).

- (149) *malombi gimalika*
ma-lombi gi- mal- ik- a
 6-maize 6AGRs-finish-STAT- FV
 ‘The maize is getting finished’

Ngonyani argues that the stative verb construction also has a potential or possibility reading. In this case the event or an action denoted by the verb is interpreted as a potential event or action, as in *likolo liyavika* ‘the vegetables can be picked’. According to Ngonyani, this sentence has the interpretation that the event of picking the vegetable is the possible event, however, without implying an agent responsible for that event.

Rugemalira (2005) states that the stative construction in Runyambo is formed by affixation of the detransitivizing suffix *-ik-*, or *-ek-*. He maintains that, like the passive, the stative suffix reduces the valency of the verb, thus changing transitive verbs to intransitive verbs. Rugemalira exemplifies stative verb constructions in Runyambo, as in *omwezi gukaboneka* ‘the moon became visible/appeared’.

Although this scholar does not explicitly discuss the interpretation of either the passive (see section 4.6.1) or the stative forms, the examples he provided demonstrate that similar to the previous studies reviewed, the meaning of the stative suffix in Runyambo is similar to the English suffix ‘-able’ or ‘-ible’, which renders the sentence the reading of ability, possibility, or potentiality, as noted in *kuboneka* ‘be visible/available, *kusomeka* ‘be legible’ and *kumanyika* be known/famous. The example sentences provided demonstrate that the stative constructions in Runyambo have an inchoative reading, just like other Bantu languages reviewed in this section.

In his descriptive grammar of Shinyiha, Asheli (2013) pointed out that the stative construction is formed by affixation of the morpheme *-eh-* or *-ih-*. He asserts that the stative affix in this language

reduces the number of arguments in a sentence structure. However, this scholar does not refer to examples to support his assertion. He provides the following instances of stative forms: *limiha* ‘be cultivatable’, *loleha* ‘be visible’, and *sebheha* ‘be in a form that can be picked up’. It can be noted that similarly to other Bantu languages, Shinyiha stative construction is characterized by multiple interpretations, including the ability, possibility and potentiality readings.

Mathayo (2014) pointed out that the stative construction in Shimwela is formed by affixation of the suffix *-uk-*, *-ik-*, or *-ek-*. This scholar exemplifies stative verb constructions as *komeka* ‘be hittable’, *ibhika* ‘be mendable’ and *uguka* ‘to be open’. Although he does not elaborate on the semantics of statives, the examples he provided show that stative forms in this language as in other Bantu languages, particularly those reviewed in this section (see section 4.5.1) have the ability, possibility or potentiality reading. The potentiality interpretation in Shimwele stative forms is evident in its co-occurrence with causative suffix, as in *mwaana anakomesheka* ‘a child is being made beatable’ and applicative, as in *mashi ganang’weeleka* ‘the water is drinkable’.

In the recent Chigogo grammar by Rugemalira (2014) it is pointed out that the stative construction is formed by affixation of *-ik-* or *-ek-*, as occurs in *manyika* ‘become/get known’, *beneka* ‘be broken’, *tulika* ‘be splittable’ and *lika* ‘be edible’. He asserts that when the stative suffix is affixed to transitive verbs, the logical subject of the sentence is completely absent. This can be noted in the examples he provided as in *mulangosiukudindika* ‘the door is uncloseable’ and *kaya siyikuzenjeka* ‘the house is unbuildable’.

The examples provided show that statives in Chigogo, similarly to other Bantu languages, express the state or the condition in which the subject DP occurs. Rugemalira states in his stative description that, unlike passives in which the logical subject can be introduced by an oblique phrase, in stative forms, the subject is completely absent. He argues that this property explains the impossibility of the co-occurrence of passive and stative in Chigogo. In fact, by virtue of their semantics, it is impermissible for the passive and the stative suffixes to co-occur. It is evident that, as in the majority of Bantu languages, the stative construction in Chigogo has multiple interpretations.

This section reviewed the current grammarians’ opinions on the stative constructions in Bantu. It has been generally evidenced that stative forms in Bantu languages present an intransitive state or condition. The studies reviewed have demonstrated that the DP subject of the stative constructions is the one attributed to the state or condition denoted by the given verb. In stative constructions, the state or situation is presented as occurring spontaneously, thus nothing external is attributed to the happening of whatever state or condition described.

The studies reviewed demonstrate that subject grammatical relation which is associated with the agent semantic role has different interpretation depending on whether the sentence is in a basic, passive or stative form. On the one hand, an agent is regarded as the doer or an actor of the action denoted by the verb in the basic form of the constructions, whereas in passive forms an agent is an entity that suffers the action, rather than the one doing or acting on the action. This has been evidenced throughout in the description of the passive constructions presented in sections 4.5.2 and 4.6.1.

On the other hand, in stative constructions, an agent is neither the doer nor the actor. In stative forms, nothing external is said to intervene the situation or to bring about the state (see sections 4.5.3 and 4.6.2). The studies reviewed demonstrate that in the stative constructions, the state or condition is presented and perceived as occurring spontaneously.

Previous studies give evidence that the passive and stative verbs have been widely studied in Bantu linguistics. Many studies on the passive and stative constructions in Bantu have attempted to distinguish the two constructions syntactically and semantically, particularly in relation to the expression of the external (i.e. subject) argument. Scholars generally agree that whereas passive constructions involve an implicit agent, stative constructions do not realize this argument, either in its syntax or in its semantics.

4.7 Previous theoretical studies on passive and stative constructions in Bantu languages

Previous research includes both typological and theoretical studies on passive and stative verb constructions in Bantu languages (Mchombo 1993, 2004, 2007; Dubinsky & Simango 1996; Lothi 2002; Seidl & Dimitriadis 2003; Khumalo 2009, among others). Some earlier grammarians such as Doke (1947) describes the stative as similar to the passive derivations and he refers to the stative as middle or quasi-passive. Doke in essence assumes that the passive and the stative verb constructions are similar, a view which motivated many scholars to conduct a comparative analysis of the two extensions (see Dubinsky & Simango 1996; Khumalo 2009).

Conducting research within the lexicalist syntactic theory, particularly the Lexical Functional Grammar (LFG), Mchombo (1993, 2004) views passive and stative verb suffixes as two distinct types of verbal extensions. He argues that, while the passive morpheme suppresses the agent argument and prevents it from being assigned grammatical function, the stative suffix completely excludes it and, as a result, the verb becomes intransitive. On the other hand, in terms of the Lexical Mapping Theory (LMT) perspectives, it has been argued that the passive and the stative constructions are different forms in that the passive alters mapping from arguments to grammatical functions, whereas the stative

performs a perfectly analogous operation on the lexical conceptual structure itself (Dubinsky & Simango 1996:749). Following Alsina (1992), Dubinsky and Simango present the thematic-syntactic representations of transitive verb *phika* ‘cook’, its passive and stative counterparts, as in (150a-c).

- (150) a.
- | | | | |
|-----------------------------|----------|---------|--------|
| <i>phika</i> | < agent | theme > | ‘cook’ |
| | | | |
| Internal argument features: | | [- r] | |
| Subject principle: | [-r, -o] | | |
| Default principle | | [+o] | |
| | SUBJ | OBJ | |
- b.
- | | | |
|-----------------------------|-----------|-------------|
| <i>phikika</i> | < theme > | ‘be cooked’ |
| | | |
| Internal argument features: | [-r] | |
| Subject principle: | [-o] | |
| | SUBJ | |
- c.
- | | | | | |
|-----------------------------|---|-------|---------|--------|
| <i>phika</i> | < | agent | theme > | ‘cook’ |
| | | | | |
| Internal argument features: | | | [-r] | |
| Passive –idw: | | ∅ | | |
| Subject principle: | | | [-o] | |
| | | | SUBJ | |

According to Lexical Mapping Theory, arguments are syntactically classified based on two primitive features: [+/- (thematically) restricted], i.e. [+/-r] and [+/-objective] i.e. [+/-o] (Bresnan 1990, 2001; Bresnan & Zaenen 1990; Zaenen & Engdahl 1994). The assumption is that the features [+/-r] and [+/-o] constrain the way in which the arguments are mapped onto grammatical functions and group grammatical functions into natural classes. Assuming the principles of LMT, the transitive verb *phika* ‘cook’ has a theme argument which is mapped to the internal argument feature [-r], whereas the subject principle assigns the features [-r, -o] to the external agent argument (Dubinsky & Simango 1996). The LMT assumes further that any remaining unspecified feature is filled with positive feature values [+o] via the default principle.

According to the proposals presented by these scholars, the distinction between passive and the stative constructions in Bantu languages is illustrated in examples (150b) and (150c) from Chichewa. In (150b) the stative verb *phikika*, thus assigns the feature [-r] to the theme internal argument, whereas the external argument, which is not present, is assigned [-o] feature, hence the theme is syntactically realized as a subject. Whereas stative verbs delete the agent argument entirely, passive verbs suppress it and promote the theme to be realized as subject. As a result, the mapping from argument structure to grammatical functions of the passive verb constructions differs from that of stative verbs, as evidenced in (150c) and (150b), respectively. The representations of passive and stative verbs above demonstrate that passive and stative verbs involve different argument structures in that the former retain an implicit agent role, while the latter do not. Passive and stative constructions in Bantu languages have mainly been examined in relation to lexicalist perspectives such as Lexical Function Grammar (LFG) and Lexical Mapping Theory, as evidenced in the studies presented in this section. In the present study, passive and stative verbs characteristics are explored in relation to argument alternations assuming a non-lexicalist approach, particularly the syntactic decomposition approach to verbal argument alternations, including anticausatives, passives and dispositional middles in Kiwoso.

It has been pointed out above in this section that some scholars regard the passive and stative as analogous operations in that both processes promote the logical DP object expression to the subject position (cf. Mchombo 2004). These considerations prompted scholars to identify standard diagnostics that can distinguish the stative from the passive. The following section presents an overview of the distinctions between the passive and the stative constructions based on the diagnostics proposed by different scholars.

4.8 Perspectives on the distinctions between passive and stative

Different scholars have characterized the passive and stative in Bantu Languages as two semantically distinct constructions (Mchombo 1993, 2004; Dubinsky & Simango 1996; Seidl & Dimitriadis 2003; Khumalo 2009). The differences between passive and stative constructions are well established when the two forms co-occur with various modifiers as the discussion in the next subsections demonstrates. Given that Chichewa and Swahili are among the most thoroughly studied Bantu languages on these aspects, most of the data are drawn from these languages, although references are also made to Ndebele, a language in which a comparative analysis of passive and stative has been recently conducted.

4.8.1. Agentivity

It has been shown that passive and stative construction constitute operations that demote the subject DP expression. However, unlike in statives, the subject DP expression in passives can be reintroduced in the syntax, and the agent argument is semantically understood. Following and developing further views of Mchombo (1993), Dubinsky and Simango (1996) noted that, the Chichewa passive and stative constructions are different. They asserts that in Chichewa, passive verb constructions involve an agent of an action which may optionally be expressed by a prepositional phrase, while the state verbs completely suppresses it. A similar observation has been made for Swahili (Seidl & Dimitriadis 2003), Ndebele (Khumalo 2009), and most recent for Nyakyusa (Lusekelo 2012). It has been noted that in Chichewa and Ndebele, in particular this distinction is more explicit in negative constructions, as illustrated in (151) (cf. Khumalo 2009:167).

- (151) a. *isivalo asivalwanga*
Isi-valo a- si- val- w- ang- a
 7-door NEG- SC- shut- PASS- NEG- FV
 ‘The door was not closed (at all)’
- b. *isivalo asivalekanga*
isi-valo a- si- val- ek- ang- a
 7-door NEG- SC- shut- STAT- NEG- FV
 ‘The door did not close (properly)’

The passive construction in (151a) has the reading that the door was not acted upon (i.e. someone was supposed to do the action of shutting the door which he/she didn’t), while in (151b) the meaning of the stative sentence is that the door is half-closed and states the action as occurring without any external force (i.e. occurring spontaneously). Khumalo (2009) maintains that in passive constructions, as in (151a), the implicit agent is optionally realized in an agentive prepositional phrase (i.e. oblique phrase), but this phrase cannot co-occur with stative verbs. A similar observation is made for Chichewa (cf. Mchombo 1993; Dubinsky & Simango 1996).

4.8.2 The control of Agent-oriented adverbials and purposes clauses

It has been noted in a number of Bantu languages such as Swahili (Seidl & Dimitriadis 2003), Ndebele (Khumalo 2009), Chichewa (Mchombo 1993, 2004, 2007; Dubinsky & Simango 1996) and Nyakyusa (Lusekelo 2012) that passive verbs unlike statives licence agent-oriented adverbs or adverbial phrases

or clauses, as well as purpose phrases or clauses. This argument can be exemplified in Ndebele, as in (152) (Khumalo 2009:168).

- (152) a. *isivalo savalwa (ngabomo)*
isi-valo sa-val-w- a (ngabomo)
 7-door 7-shut-PASS- FV (deliberately)
 ‘The door was closed (deliberately)’
- b. **isivalo savaleka (ngabomo)*
isi-valo sa-val-ek- a (ngabomo)
 7-door 7-shut-STAT- FV (deliberately)
 ‘The door closed (deliberately)’
- c. *isivalo savalwa (ukuthi abantwana bangagodoli)*
Isi-valo sa-val-w- a (ukuthi aba-ntwana ba-nga-godol-i)
 7-door 7-shut- PASS- FV (so that 2-children 2-NEG-cold-NEG)
 ‘The door was closed (so that children do not get cold)’
- d. **isivalo savaleka (ukuthi abantwana bangagodoli)*
isi-valo sa-val- ek- a (ukuthi aba-ntwana ba-nga-godol-i)
 7-door 7-shut- STAT- FV (so that 2-children 2-NEG-cold-NEG)
 ‘The door closed (so that children do not get cold)’

Examples in (152) demonstrate that the addition of agent-oriented phrase *ngabomo* in (152b) and the purpose clause, *ukuthi abantwana bangagodoli* in (152d) render the stative sentence ungrammatical.

4.8.3 Co-occurrence with other argument changing operations

Dubinsky and Simango (1996) pointed out that passive and stative differ in that, while the former can follow other argument changing operations such as applicative and causative, the latter cannot. They maintain that such kind of observation is readily predictable if stative verb construction is regarded as an operation that alters lexical conceptual structure, and passive verb construction as a process that affects mapping from argument structure to grammatical functions. Dubinsky and Simango postulate that passive verb constructions and stative verb constructions involve two different kinds of rules.

However, Khumalo (2009:170-171) has demonstrated that in Ndebele, both passive and stative verbs co-occur with other argument changing operations, especially the applicative and the causative, as

the examples in (153) and (154), respectively demonstrate. It has also been noted that in Swahili, the stative verb can co-occur with the causative (Seidl & Dimitriadis 2003).

- (153) a. *abafana basengelwa uchago ngubaba*
aba-fana ba- seng- el- w- a u-chago ngubaba
 2-boys AGRs- milk- APPL- PASS- FV 3-milk by 1father
 ‘The boys were milked milk by the father’
- b. *abafana basengiswa uchago (ngubaba)*
aba-fana ba- seng- is- w- a u-chago ngubaba
 2-boys AGRs- milk- CAUS-PASS- FV 3-milk by 1father
 ‘The boys were made to milk by the father’
- (154) a. *ummango uqumeleka ezitolo*
um-mango u- qum- el- ek- a e-zitolo
 3-journey AGRs- cut- APPL- STAT- FV LOC-store
 ‘The journey can be short-cuttable at the store’
- b. *umvundla wagijimiseka emini*
um-vundla wa- gijim- is- ek- a e-mini
 3-hare AGRs-chase- CAUS-STAT- FV LOC-day
 ‘The hare was chasable during the day’

The reviewed studies demonstrate that unlike in Chichewa, but similarly to Ndebele and Swahili, the stative in Zulu (Doke 1945) and Shimwela (Mathayo 2013) can co-occur with the applicative and causative suffixes (cf. sections 4.5.3 and 4.6.2). These variations support the view by several scholars (Mchombo 1993; Rugemalira 1993, 1995; Seidl & Dimitriadis 2003) that the stative morpheme is difficult to characterize, as it has different properties in different Bantu languages.

4.8.4 Restrictions on base verbs

In a number of studies it has been claimed that passive and stative suffixes differ in terms of their range of application. Dubinsky and Simango (1996) assert that although both passive and stative morphemes in Chichewa can be affixed to any transitive verb, the stative morpheme can occur with

transitive change of state verbs only⁹. In other words, whereas passive morpheme can be affixed to both transitive change of state verbs and non-change of state verbs, stative morpheme cannot be affixed to transitive verbs whose themes do not undergo a change of state. However, Swahili (Seidl & Dimitriadis 2003) and Ndebele (Khumalo 2009) example sentences demonstrate that the stative morphemes can be affixed to both change of state verbs and non-change of state verbs. This evidence suggests that across languages, stative and passive verb constructions are not homogenous. Whereas some languages like Chichewa restrict the application of stative suffix to specific types of verbs, others (e.g., Swahili and Ndebele) are less restrictive, as Ndebele words such as *lunywa* and *lumeka* from *luma* ‘bite’ and *hle kwa* and *hlekeka* from *hleka* ‘laugh’ demonstrate (Khumalo 2009:171).

4.9 Generative approaches to passive verb constructions

Generative approaches to linguistics aim to develop formal explicit models of various aspects of human language in which through development of such models formal claims about language can be expressed and tested. This section aims to discuss some of the major studies on passive verb constructions, particularly the studies invoking generative theoretical perspectives on grammatical relations. In this section, four different views from different scholars are reviewed and the focus is given to major assumptions on the grammatical changing relations, as exemplified in passive verb constructions.

4.9.1 Perlmutter and Postal (1977)

It has been pointed out that structuralist and transformational grammar use various devices such as word order or movement to account for the universal characterization of passive verb structures (Perlmutter & Postal 1977). These scholars, however, observe that such devices as word order, case marking, or verbal morphology cannot adequately provide a cross-linguistic account for passive clause universals. Given this observation, Perlmutter and Postal (1977) propose that the universal characterization of passive verb constructions needs to be accounted for in terms of grammatical relations.

Perlmutter and Postal (1977) argue that viewing grammatical constructions such as passives in terms of grammatical relations enables one to see that the same constructions recur across languages,

⁹ Change of state verbs are those verbs whose themes undergo ‘a change of state’ i.e. whose theme material properties, location, or existence are affected by the event named by the verb.

however, with different morphology and word order. The scholars, therefore, propose two universals for passive verb clauses which can be explained with reference to relational notions such as ‘subject of’ and ‘direct object of’. The two proposed universals of passive verb constructions are stated in (155) (Perlmutter & Postal 1977:9).

- (155) a. a direct object of an active clause is the (superficial) subject of the
‘corresponding’ passive
- b. the subject of an active clause is neither the (superficial) subject nor the
(superficial) direct object of the corresponding passive.

Perlmutter and Postal assert that the effect of the two universals is to make a passive clause a (superficially) intransitive clause, which is, however, possible if there is no any other rule that allows some other nominal to occur as the direct object of the clause. They maintain that if the two universals are correct, a direct object of an active clause is the subject of an intransitive clause in the ‘corresponding’ passive clause. This view parallels the D-structure and S-structure movement assumed in Government-Binding (GB) discussed in the following subsection.

4.9.2 Chomsky (1981)

Chomsky (1981) accounts for passive by invoking the interaction of two modules of Government-Binding (GB), namely the theta theory and case theory in relation to the lexical specification of the passive forms. In GB theory, theta theory assigns theta roles to the argument of the verb, which in turn captures the semantic relationship between a verb and its arguments. The assignment of theta roles specifies the argument structure of the construction, as stated in the projection principle in (156), and the theta criterion in (157).

(156) The projection principle

Representations at each syntactic level, (i.e. Logical Form (LF), and Deep- and Surface-structure) are projected from the lexicon, in that they observe the subcategorization properties of lexical items (Chomsky 1981:29).

(157) The theta criterion

Each argument bears one and only one theta role, and each theta role is assigned to one and only one argument (Chomsky 1981:36).

Following the projection principle and the theta criterion, the instances of argument assignments of a verb are discharged ensuring the syntactic representation of the verb's lexical information. By contrast case theory deals with the appearance and the distribution of NPs. After an argument has been assigned a theta role, it must then be case-marked for it to phonetically be realized. This is required following the case filter principle stated in (158).

(158) **The case filter principle**

NP if NP has phonetic content and has no case (1981:49)

Following this principle, case is assigned in terms of the structural relation known as government which is dependent on the notion of c-command. Therefore, for active verbs, nominative case is assigned to the subject position [NP, IP] or [NP, S] by INF, and an accusative case is assigned to the object position or that of complement to the verb. A standard versions of government and c-command are stated in (159) and (160), respectively based on Carnie (2013).

(159) **Government**

α is governed by β if α is c-commanded by β and no major category or major category boundary appears between α and β .

(160) **Constituent-command (c-command)**

x c-commands y if every node dominating x also dominates y and neither x nor y dominates the other.

According to these principles of theta and case theories, Chomsky suggests that, the passive construction is best characterized on the basis of argument assignment of the passive particles in the lexicon. In passive constructions, the external argument theta role and its assignment of accusative case is absorbed, hence resulting in the passive properties presented in (161).

- (161) a. [NP, S] does not receive a theta role
b. [NP, VP] does not receive case within VP, for some choice of NP in VP

The specifications in (161) indicate that the internal argument theta role is as usual expressed at D-structure, although it fails to receive accusative case because this feature is absorbed by the passive morphology. The D-structure of the passive constructions lacks a subject because no external argument is assigned, thus there is no subject projection. Chomsky concludes that in passive verb

constructions, the logical objects are structurally subjects as the result of the movement between D-structure and S-structure, which is caused by the lack of case assignment to the object NP.

4.9.3 Baker (1988)

Baker (1988) analyzes passive formation as an operation that alters the grammatical function of a sentence. Invoking the incorporation principle¹⁰, he describes different linguistic patterns commonly referred to as grammatical function changing operations (cf. section 4.2). His approach differs from the GB theory approach in that the D-structures of active and passive constructions are thematically similar. In other words, Baker regards the active and the passive verb constructions to be semantically identical.

Baker advances his analysis of grammatical function changing operations by positing the incorporation principle based on the observation that the causative and the applicative can be passivized. He argues that such co-occurrence is only possible through syntactic derivation by means of incorporation. Baker's view seems to suggest that lexical operations can only feed syntactic operations and not the other way round, as is standardly assumed. If this suggestion happens to be correct, passive formation must, therefore, be syntactic operation, thus must of course occur in the syntax. This kind of analysis suggests that the passive morpheme does not absorb the external theta role, and therefore, following theta criterion, the passive verb must then assigns its external theta-role to something. Baker postulates that this theta-role is assigned to the passive morphology which appears on the verb at S-structure through incorporation. He maintains that at D(eep)-structure, the passive morpheme appears under INFL (i.e. inflection).

Generally, it can be noted, however, that Baker's analysis of passive by means of incorporation parallels Chomsky's (1981) GB analysis in that movement between D-structure and S-structure accounts for the appearance of a logical object argument in subject position. On the other hand, incorporation principles differ from GB theory in that the former postulates identical semantics for active and passive forms, whereas the latter treats the two forms as semantically distinct phenomenon. In fact active and passive constructions are semantically related but not identical, otherwise languages would not allow both structures to co-exist. Generally, generative approaches to passive constructions reviewed in this section demonstrate that cross-linguistically, passive constructions involve

¹⁰Incorporation refers to a process in which one syntactic head moves to combine with another syntactic head.

grammatical relation changing operations that alter subject and object relations in a very systematic way.

The present study explores the properties of change of state and change of location verbs in relation to argument alternations, including passives. The studies reviewed indicate that most studies on passive verb constructions in Bantu languages have based their analysis on lexicalist approaches. In the present study, passive verb constructions are analyzed invoking non-lexicalist assumptions in an attempt to establish the relationship between passives and other related argument alternation constructions such as anticausatives and dispositional middles in Kiwoso.

4.10 The locative inversion construction: an overview

Location inversion is among well studied language aspect in both typological and theoretical perspectives (Bresnan & Kanerva 1989; Bresnan 1994; Levin & Rappaport Hovav 1995; Machobane 1995; Moshi 1995; Demuth & Mmusi 1997; Marten 2006; Khumalo 2010; Zeller 2013, among many others). These studies demonstrate that locative inversion construction involves an operation that alters the grammatical relations of the arguments. In the majority of Bantu languages, in canonical sentences, the subject DP occupies preverbal position, while the locative DP appears postverbally. In the inverted constructions, the locative DP takes subject position and the DP denoting logical subject occurs in the postverbal position. The discussion on locative inversion construction in Bantu languages has revolved around several issues, namely the type of verbs that undergo inversion, the status of locative DP as subject, the properties of inverted subject, and the discourse function of the construction. In this section, works from individual scholars are reviewed in relation to the mentioned aspects surrounding locative inversion construction, mainly in Bantu languages as well as in English. On the one hand, locative inversion studies in Bantu languages by Bresnan and Kanerva (1989), Machobane (1995), Moshi (1995), Demuth and Mmusi (1997), and Marten (2006) are reviewed in this section. On the other hand, a study by Bresnan (1994) is considered to illustrate locative inversion in English.

Similar to passive and state verb constructions reviewed in the previous sections, this part also reviews some theoretical account of locative inversion construction. In this regard, attention is given to Lexical Functional Grammar perspective offered by Bresnan (1994), and Principles and Parameters framework by Machobane (1995) and Levin and Rappaport Hovav (1995). The following section focuses on the locative inversion construction in various Bantu languages and in English. In these

studies, the focus is given to central issues surrounding locative inversion construction across languages, as previously mentioned.

4.10.1 Bresnan and Kanerva (1989)

In examining locative inversion in Chichewa, Bresnan and Kanerva noted that Chichewa is one of the Bantu languages that has preserved the Proto-Bantu locative classes: 16 (*pa-*), 17 (*ku-*), and 18 (*mu-*). These scholars demonstrate that in Chichewa, these classes are productive and they trigger subject-verb agreement. Bresnan and Kanerva maintain that in locative inversion, the preposed locative exhibits subject-verb agreement, and that such an element is an obligatory part of the sentence and cannot be separated from the verb, as exemplified in (162).

- (162) a. *kumudzi kuli chitsime*
ku-mu-dzi ku-li chi-tsime
 17-3-village 17-be 7-well
 ‘In the village is a well’
- b. *mmitêngo mwakhala anyani*
m-mi-têngo mw- a- khal- a a-nyani
 18-4-tree SC18- PERF- sit- FV 2-baboons
 ‘In the tree are sitting baboons’

These scholars assert that just like in the canonical sentences, the preposed locative in inverted sentences can be raised to the subject position of the matrix clause, and occur in relative verb clauses, as examples in (163a) and (163b), respectively indicate. The examples are from Bresnan (1994:94).

- (163) a. *mvula yayamba kugwa kumudzi*
mvula y- a- yamba ku- gwa ku-mu-dzi
 9-rain 9- PRF- start INF- fall 17-3-village
 ‘It has started to rain at the village’
- b. *n’pâti [paméné páimá nkhandwe]?*
n’pâ- ti [pa-méné p- á- im- á nkhandwe]?
 COP16-Q 16-REL 16-REL-PRF-stand- IND 9fox
 ‘In which place is standing the fox?’

Bresnan and Kanerva demonstrate further that in Chichewa, the preposed locatives, like prototypical subjects, can take a non-finite VP as modifier or as a predicative complement, thus functioning as the external argument of the non-finite verb, as their examples in (164) illustrate. They state that these characteristics provide strong evidence for the view that the preposed locative DPs in Chichewa locative inversion constructions are typical subjects.

- (164) a. *mnkhalangó [vp mókhálá mikângo]*
m-nkhalangó [vp m- ó- khál- á mi-kângo]
 18-9forest 18- ASC-INFL- live- IND 4- lion
 ‘In the forest where there live lions’
- b. *mnyumbá ndi [vp mógóná nkhuûku]*
m-nyumbá ndi [vp m- ó- gón- á nkhuûku]
 18-9house COP 18- ASC-INF- sleep- IND 10chicken
 ‘In the house is where chickens sleep’

Bresnan and Kanerva characterize the inverted subject as an object for the reason that it occupies a position within the smallest phrase containing the verb. However, these scholars pointed out that, unlike the typical object, the inverted subject in locative inversion cannot be used in passive or relative verb clauses, and also cannot be associated with the object agreement prefix. These properties set the inverted subject apart from the prototypical object relation in Chichewa.

In terms of the discourse function of the locative inversion construction, Bresnan and Kanerva assert that locative inversion is used in presentational function. They maintain that in an inverted sentence, the preposed locative denotes a topical element which expresses old information, while the inverted subject is focal, introducing new information.

In relation to the verbs that are found in Chichewa locative inversion, Bresnan and Kanerva assert that locative inversion construction is possible only with intransitive verbs, including motion verbs, verbs of spatial configuration, and verbs of existence. They also note that some passive transitive verbs undergo locative inversion in Chichewa.

4.10.2 Machobane (1995)

In her study of locative inversion in Sesotho, Machobane noted that, unlike Chichewa, Sesotho has lost the traditional locative noun class prefixes, and only the remnant of class 17 (*ho-*) exists. This scholar asserts that in Sesotho, locative nouns are derived by attaching the locative prefix *ho-* (equivalent in meaning to the English preposition ‘to’), and the suffix *-ng*. Machobane maintains that in locative inversion construction, it is the locative prefix *ho-* that determines the agreement on the verb, irrespective of the type of locative nouns appearing in the preverbal position, as examples in (165) demonstrate (Machobane 1995:120). It has been noted that similar to many Bantu languages, inherent locatives are not marked in Sesotho.

- (165) a. *thabeng hóachésa*
 thabe- ng hó- a- chés- a
 9mountain- LOC 17- PRS- burn- IND
 ‘On the mountain it is cold’
- b. *fátse hómóngobo*
 fátse hó-móngobo
 ground 17-3damp
 ‘The ground is damp’

Machobane notes that, like prototypical subjects, the preverbal locative nouns in Sesotho locative inversion undergo subject raising, as example (166) demonstrates (Machobane 1995:121). A similar observation is made for Chichewa, as shown in the previous section.

- (166) *thabeng hólébélétsoé hobáta*
 thab- eng hó- lébéléts-o- é ho- báta
 9mountain LOC 17- expect-PASS- PRF INF- cold
 ‘In the mountain it is expected to be cold’

With regard to the inverted subject in locative inversion, the study by Machobane demonstrates that the postposed logical subject appears in the object position, but unlike the typical object, it cannot be passivized or object-marked, as examples in (167a) and (167b), respectively illustrate (Machobane 1995:130).

- (167) a. **banana bafietsoe kesekólong*
banana ba- fiets- o- e ke- sekólo-ng
 2girls 2- sweep- **PASS**- PRF by- 7school-LOC
 ‘The girls have been swept by (at) the school’
- b. **sekóolong hobafietse*
sekóolo-ng ho- ba- fiets- e
 7school-LOC 17- **2OBJ**- sweep- PRF
 ‘At school have sweet they’

In relation to verbs that undergo locative inversion construction, Machobane points out that all verbs can be used in this construction except active transitives. This is contrary to Chichewa which limits the verbs that can be found in locative inversion to intransitives and passive verbs (cf. section 4.9.1). Machobane does not refer to the discourse function of the locative inversion in Sesotho. However, Demuth (1990) reported that similar to Chichewa, the inverted subject in Sesotho locative inversion introduces the new discourse referent. This suggests that, similarly to many languages, locative inversion in Sesotho is used in the discourse function of presentational focus.

4.10.3 Moshi (1995)

Moshi conducted a study on locatives in KiVunjo-Chaga. In her study Moshi noted that, unlike Chichewa and Sesotho, Kichaga has preserved two (16 (*ha-*) and 17 (*ku-*)) of the three Proto-Bantu locative prefixes. This scholar demonstrates that the preverbal locatives in Kichaga locative inversion exhibit typical subject properties such as subject-verb agreement, and also can undergo subject raising, as her examples in (168a) and (168b), respectively indicate (Moshi 1995:131). Similar cases have been observed in Chichewa and Sesotho (cf. sections 4.10.1 and 4.10.2, respectively).

- (168) a. *handu ha hawozre kando*
ha-ndu ha ha- wozre kando
 16-place here 16- have 9food
 ‘The place here has food’
- b. *rokonyi kukeri iaka mozro*
rook- nyi ku-keri i- aka mozro
 9kitchen-LOC 17-seem INF- light fire
 ‘In the kitchen seems to burn a fire’

Moshi states that unlike Sesotho, Kichaga exhibits two locative prefixes as agreement markers. She maintains that the appearance of the *ha-* or *ku-* prefixes in subject-verb agreement is determined by the semantics of the preverbal locative nouns. She demonstrates that when the locative subject nouns denote specific location or surface area, the prefix *ha-* is used. By contrast, the locative prefix *ku-* triggers subject-verb agreement of all the sentences in which their locative subject nouns denote general or inside location (cf. examples 168a-b).

In her study, Moshi did not comment on the discourse function of the locative inversion construction, nor did she provide information regarding specific verbs that undergo locative inversion in KiVunjo-Chaga. However, Marten (2006) noted that, similarly to Chichewa, Kichaga locative inversion employs intransitive verbs.

4.10.4 Demuth and Mmusi (1997)

Demuth and Mmusi compare locative inversion and presentational focus in Setswana with that of other Bantu languages. These scholars note that similar to Chichewa, Setswana locative noun prefixes, 16 (*fa-*), 17 (*ko-/kwa-*) and 18 (*mo-*) are still productive in nominal morphology. However, unlike Chichewa, but similarly to Sesotho, locative nouns in Setswana are invariably marked by the suffix *-ng*, and agreement on verbs is exclusively marked by what they name class 17 formative *go-*, as exemplified in (169) (Demuth & Mmusi 1997:8).

- (169) *fásetlharéng góóémé basímané*

<i>fá-</i>	<i>se-</i>	<i>tlharé-</i>	<i>ng</i>	<i>gó-</i>	<i>émé</i>	<i>ba-</i>	<i>símané</i>
16-	7-	tree-	LOC	17-	stand/PRF	2-	boys

 ‘By the tree stand the boys’

Demuth and Mmusi maintain that, like typical subjects, preposed locatives trigger subject-verb agreement, as evidence in (169), and can also undergo subject raising, as shown in (170) (Demuth & Mmusi 1997:11).

- (170) *kwánokêng góbónágala gothíba*

<i>kwá-</i>	<i>nokê-</i>	<i>ng</i>	<i>gó-</i>	<i>bónágala</i>	<i>gothíba</i>
17-	9river-	LOC	17-	seem	15cloudy

 ‘At the river it seems to be cloudy’

These scholars did not provide views regarding the properties of the inverted subjects. Nevertheless, Salzmann (2004) pointed out that Setswana is similar to Sesotho in terms of the properties of logical subject in locative inversion construction.

As for argument structure, Demuth and Mmusi assert that, unlike in Chichewa, locative inversion in Setswana allows a number of verb types. They maintain that all verbs can undergo locative inversion except transitive and ditransitive verbs. They demonstrate that locative inversion construction in Setswana is used for presentational focus.

4.10.5 Marten (2006)

Marten conducted a study on locative inversion in Otjiherero. The scholar observes that the characteristics of locative inversion in Otjiherero resembles that of other Bantu languages, such as Chichewa and Setswana. He characterizes Otjiherero locative inversion in comparison with that of Chichewa and Setswana. Marten states that, like in Chichewa, but contrary to Setswana, Otjiherero displays all three locative noun class prefixes, 16, 17, and 18. He asserts that these prefixes are productively used in locative nominal morphology and trigger agreement on verbs.

Marten pointed out that, similarly to Chichewa and Setswana, the locative DP of the inverted sentences exhibits properties of the grammatical subject. On the other hand, the postposed DP behaves like the logical subject and cannot be omitted or separated from the verb, just like that in Chichewa and Setswana. In addition, Marten asserts that the postposed DP in Otjiherero locative construction is used in presentational focus as is the case with many other Bantu languages.

In relation to verbs that can undergo locative inversion, Marten states that unlike Chichewa and Setswana, Otjiherero locative inversion constructions license all verb types, except ditransitive verbs. He argues that unaccusatives (171a), passivized transitives (171b), and active unergative verbs (171c) undergo locative inversion in Otjiherero, as examples demonstrate (Marten 2006:114).

- (171) a. *póndjúwó párárá éróngá*
pó-ndjúwó p- á- rárá é-rúngá
 16-9house 16- PAST- sleep 5-thief
 ‘At the house slept a/the thief’
- b. *kómúítí kwápósé ózóndjímá*
kó-mú-tí kw- á- pósé ózó- ndjímá
 17-3-tree 17- PAST- make noise 10- baboons
 ‘In the tree made noise (the) baboons’

- c. *móndúndú mwávázéwáómuátjé*
mó-ndúndú mw- á- váz- éw- á ómu- átjé
 18-9mountain 18- PAST- find- PASS- FV 1- child
 ‘On the mountain was found a/the child’

4.10.6 Bresnan (1994)

It has been noted that the locative inversion construction in English is similar to that in Bantu languages, although there are identifiable differences between English and Bantu constructions (cf. Salzmann 2004). Bresnan (1994) points out that in Bantu languages such as Chichewa, subject-verb agreement is controlled only by the preverbal locatives. By contrast, it is the theme argument that triggers agreement on the verbs in English, as (172) illustrates (Bresnan 1994:95).

- (172) a. In the swamps (was)/(*were) found a child
 b. In the swamp (were)/(*was) found two children

Bresnan asserts that, similarly to other languages, the inverted locative phrases in English can be raised to subjects (173a). However, unlike the inverted locative phrases which are DPs in many Bantu languages, the inverted locatives are PPs in English, thus cannot be raised to the object position, as (173b) demonstrates (Bresnan 1994:109).

- (82) a. On this wall is likely to be hung a portrait of our founder
 b. *I expect on this wall to be hung a portrait of our founder

This scholar maintains that, similarly to Bantu languages, preposed locatives in English can relativize, as exemplified in (174) (Bresnan 1994:87). Unlike Bantu languages such as Chichewa, attributive VPs headed by participles cannot be inverted, as (175b) illustrates (Bresnan 1994:95).

- (174) a. I expect that on these trails can be found many kinds of mushrooms
 b. ... these trails, on which I expect- can be found many kinds of mushrooms
- (175) a. she stood on the corner [on which was standing another woman]
 b. *she stood [on the corner] [VP standing another woman]

With regard to the properties of the theme argument in English locative inversion, it has been evidenced that the theme does not display typical subject properties apart from its ability to trigger subject-verb agreement. Nevertheless, given its behaviour, the theme argument in English locative inversion cannot be associated with the object relation, thus making it difficult to determine the syntactic status of the inverted logical subject in English.

Bresnan pointed out that, similarly to Bantu languages, not all verbs can undergo locative inversion in English. She asserts that locative inversion in English is restricted to intransitive and certain passivized transitive verbs only. She asserts that locative inversion in English is ungrammatical with transitive and unergative verbs. However, scholars such as Levin and Rappaport Hovav (1995) note that some unergative verbs in English can undergo locative inversion (cf. section 4.10.2.2). In relation to the discourse function of English locative inversion, Bresnan argues that, similarly to Chichewa, the locative inversion construction in English is used for presentational focus (see sections 4.10.1-4.10.5).

The studies reviewed on locative inversion constructions in Bantu languages and in English can be summarized as follows: in relation to locative morphology, the Bantu languages indicate that not all languages exhibit productive locative morphology. For example, unlike Chichewa, Setswana and Otjiherero exhibit all of the three Proto-Bantu locative prefixes. Sesotho and Kichaga have lost some of the prefixes, thus locative nominal morphology is less productive in these languages. The locative nouns in Sesotho and Kichaga are basically derived through suffixes (see sections 4.10.2 and 4.10.3).

With regard to the properties of the preposed locatives, in all Bantu languages reviewed, the preposed locative DPs exhibit subject status, as evidenced by properties of agreement and raising to subject. The languages reviewed indicate further that the postposed subjects occupy the object position. However, these subject arguments do not exhibit the typical object properties such as the properties of raising to subject in passive verb constructions, occurring as antecedent head of a relative clause, and being associated with an object agreement affix.

The studies reviewed give evidence of variations in relation to verbs that can undergo inversions. It has been demonstrated that, while locative inversion in Chichewa, Kichaga, and English is restricted to intransitives (unaccusatives), Setswana and Sesotho allow all verb types, except active transitives. By contrast, Otjiherero presents the most liberal system in that all verbs can undergo inversion, except ditransitives. Regarding the discourse function of the construction, it has been evidenced that in all languages surveyed in this section, the construction is used in the discourse function of presentational focus.

Generally, the properties identified for locative inversion constructions across languages seem to demonstrate more similarities than differences. The present study aims to explore this construction in Kiwoso in relation to motion verbs, verbs of existence and change of state verbs. Similarly to anticausatives, locative inversion constructions have been claimed to be an unaccusative diagnostic, thus an areas worth exploring and contributing through examining the Bantu language Kiwoso.

4.11. Approaches to locative inversion

The previous sections presented theory-neutral data on locative inversion constructions from different Bantu languages and English. The present section focuses of theoretical approaches to locative inversion. The discussion on theoretical perspectives centres on two frameworks: Lexical Functional Grammar (LFG), in which the study by Bresnan (1994) is considered, and the Principles and Parameters approach (PP). In relation to PP, the studies of Machobane (1995) and Levin and Rappaport Hovav (1995) are reviewed. The discussion of theoretical accounts of locative inversion constructions is restricted to these two approaches because these constructions have been widely studied within these perspectives.

4.11.1 Bresnan (1994)

Bresnan examined locative inversion in terms of Lexical Mapping Theory (LMT), a sub-theory of LFG. She argues that the locative inversion construction is restricted to predicates whose highest thematic role is a <theme>. Her characterization of predicates that undergo locative inversion is based on the thematic classification of verbs developed in LFG, shown in table 21, taken from Demuth and Mmusi (1997).

Verb type	Active	Passive
Unergatives	<ag, loc>	<(ag), loc>
Unaccusatives	<th, loc>	<(th), loc>
Transitives	<ag, th, loc>	<(ag), th, loc>
Ditransitives	<ag, th, pat, loc>	<(ag), th, loc>

Table 21: Predicate types and their thematic roles

Given the classification of predicates and their associated thematic information in table 21, Bresnan argues that in relation to locative inversion, only predicates with a theme as their highest role can participate in locative inversion. This suggests that except unergative predicates, all other predicates in table 21 undergo locative inversion. She asserts that unergative verbs are incompatible with

locative inversion because their highest thematic roles are <agents>. Bresnan claims that the restriction of unergative verbs to locative inversion is a universal characteristic of these constructions. However, the studies reviewed in section 4.9 and its subsections do not support this claim.

In LMT, syntactic functions are classified according to the features [+/-r], as appears in (176) (see (Bresnan 1994:89 fn 25)).

- (176) [-r]: functions that are semantically unrestricted in terms of semantic role: SUBJ, OBJ
 [+r]: functions with semantically restricted thematic roles: OBJ, OBL
 [-o]: functions that lack object properties: SUBJ, OBL
 [+o]: functions showing typical object-like property: OBJ

Given the classification of syntactic functions in (176), Bresnan argues that an unaccusative verb *khala* ‘remain’ in Chichewa licenses two semantic roles: a <theme> and a <location>, and receive their default classification, as shown in (177).

- (177) theme/patient: [-r] Locative: [-o]

It is evident in (177) that the locative role can be generated in the subject position, but in the normal case, the default applies and induces restrictions to the location argument. The theme remains underspecified due to monotonicity. The theme is specified as [-r] which is compatible with both the subject and the object functions. However, according to subject condition rule which requires that all lexical form or function structure to have a subject, the theme is then mapped onto the subject function, as (178) shows.

- | | | |
|-----------------------------|-------|--------------------|
| (178) <i>khala</i> ‘remain’ | <th | loc> |
| | | |
| Intrinsic: | [r] | [-o] |
| Defaults: | | [+r] |
| | <hr/> | |
| | S | OBL _{Loc} |

It has been argued that it is possible for the specific default to apply, and given the view that the theme argument is the most prominent argument in locative inversion constructions, the locative becomes unrestricted. The general subject default then becomes useless because the features it can assign would threaten monotonicity. Thus, the theme remains underspecified again, functioning as subject

or object, but because the subject function is already taken by locative, the theme is then mapped onto the object function, as in (179).

(179)	<i>khala</i> ‘remain’	<th	loc>
	Intrinsic:	[-r]	[-o]
	Defaults:		[-r]
		O	S

Bresnan asserts that transitive predicates such as *peza* ‘find’ is not allowed in Chichewa locative inversion constructions because the theme is not the highest argument of such predicates. Thus, the necessary contexts for the special subject default to apply is not present. Following function-argument bi-uniqueness principle, the theme is mapped on the object function because the agent is already classified as subject, as (180) illustrates.

(180)	<i>peza</i> ‘find’	<ag	<th	loc>
	Intrinsic:	[-o]	[-r]	[-o]
	Defaults:	[-r]		[+r]
		S	O	OBL _{Loc}

Bresnan (1994) argues that transitive passive predicates undergo locative inversion because passive operation demotes the agent, and promotes the theme to become the highest argument, thus providing the context for the special subject default, as (181) illustrates.

(181)	<i>peza</i> ‘find’	<ag	<th	loc>
	Intrinsic:	[-o]	[-r]	[-o]
	Passive:	-édwØ		
	Defaults:			[-r]
		O	S	

Bresnan asserts that the restriction of the *by*-phrase in locative inversion can be explained by assuming that the agent is still present by being bound to the adjunct agent, as a result, the context for the special subject default is destroyed. Therefore, only the normal subject default applies, as illustrated in (182) (Bresnan 1994:81).

(182)	<i>peza</i>	‘be found by’	<ag _i	<th	loc>
	Intrinsic:		[-o]	[-r]	[-o]
	Passive:	-édwØ			
	Defaults:			[+r]	
			S	OBL _{Loc}	

Bresnan further argues that passivized ditransitive and applied predicates do not undergo locative inversion. The argument in this regard is that these predicates lack a theme argument, thus the context for the special subject default is not present. This is illustrated in (183).

(183)	<i>thamangira</i>	‘run for’	<ag	<ben	loc>
	Intrinsic:		[-o]	[-r]	[-o]
	Passive:	-édw Ø			
	Defaults:			[-r]	
			O	S	

Similar to passivized ditransitive and applied predicates, this scholar states that unergatives are also unacceptable in locative inversion for the same reason that, these predicates involve an agent as their highest argument, thus the special subject default cannot apply, as (184) illustrates.

(184)	<i>kodz</i>	‘urinate’	<ag	loc>
	Intrinsic:		[-o]	[-o]
	Defaults:		[-r]	[+r]
			S	OBL _{Loc}

Bresnan argues that, although the theme argument is assigned the object function in locative inversion constructions, it is not a prototypical object because being the highest semantic role, it occurs as subject semantically, and also, it does not passivize. This view is accounted for by Lexical Mapping Theory, given that the passive operation removes the theme argument in locative inversion constructions, the context for these constructions is eliminated. As a result, the structure formed is ungrammatical because the subject condition is violated, as evidenced in (185).

(185) <i>khala</i> ‘remain’	<th	loc>
Intrinsic:	[-r]	[-o]
Passive: -édw	Ø	
Defaults:		[+r]
	*	OBL _{Loc}

Lexical Mapping Theory perspective to locative inversion in Bantu languages and in English seems convincing for two major reasons. Firstly, the approach characterizes the properties of the participants and account for the argument structure restrictions. Secondly, the mode integrates the information structural properties of locative inversion constructions and elegantly articulates the triggering context. It is demonstrated that locative inversion is only available in the context of presentational focus. In addition, the approach makes it possible to identify the similarities of locative inversion constructions between English and Bantu languages, while attributing the differences to the idiosyncratic surface structures.

However, Lexical Mapping Theory fails to capture the implicational relation between the different argument structure types. It has been demonstrated that languages that allow unergative predicates to undergo locative inversion, also permit unaccusative verbs, but the opposite is not the case (cf. Salzmann 2004).

Concerning argument structure, Lexical Mapping Theory has inadequacies in terms of the phenomenon of subject-object alternation. It has been evidenced that in Sesotho (cf. section 4.10.2) and Setswana (cf. section 4.10.4), that the agent can be mapped onto the object function which requires that the agent be intrinsically unspecified. In the Lexical Mapping Theory account, this view has been demonstrated to have undesirable results with transitive verbs. This suggests that the Lexical Mapping Theory needs to be revisited. Moreover, although the presentation of different argument structure types allows the preservation of the unaccusative analysis for English and Chichewa, it does not address the restriction of its application in the two languages.

Bresnan’s (1994) comparative analysis of English and Chichewa locative inversion advances the view that English locatives are topics, while Chichewa locatives are only subjects. This is an unsatisfactory account because in both languages, locatives are topical (see Salzmann 2004). Based on Bresnan’s view, it is, therefore, difficult to capture the information structural similarities between the two languages if location arguments have to be analyzed differently.

4.11.2 The principles and parameters approach of generative grammar

The earlier versions of generative grammar such as Government-Binding (GB) theory (Chomsky 1981), which has been developed into the Minimalist Program (MP) (Chomsky 1995), is still influential in formal syntax research. In these earlier approaches, lexical items were considered as projections of D-structure, (i.e. a syntactic representation of argument structure). According to the GB theory, D-structure level is mapped onto S-structure through movement operations such as raising, wh-movement, and extraposition, to achieve the surface order. After this process, the derivation splits into two interpretive modules: the Phonetic Form (PF) and the Logical Form (LF). PF is concerned with articulatory processes, whereas the LF level is the interface for semantic interpretation. This level represents the scope of quantifiers and forms a syntactic input to semantic interpretation in the conceptual systems.

Movement operations are often controlled in order to avoid violating some principles of grammar. For example, the subject in a non-finite complement has to raise to the subject position of the matrix sentence for case assignment, thus obeying the case requirement rule. Within the same approach, it is also postulated that movement can also be controlled by morphology. Some proponents of the syntactic derivation approach assume that verbs get their inflectional morpheme by incorporating affixes which are base-generated in functional heads such as inflectional (I), (aspect) ASP, tense (T), or agreement of subject (AgrS).

However, the introduction of the Minimalist Program (MP) has changed some of the assumptions made in the earlier version of generative grammar (GG) considerably. In the current MP version, the lexical items regarded as the projection of D- and S-structures in the earlier versions of generative grammar, are now taken from the lexicon and combined step by step by a merger operation (cf. chapter 1, section 1.8.3). Thus, the notion of D-structure no longer exists. Also, in MP, lexical items are inflected, hence no morphological trigger is assumed, and the checking theory establishes the relation. Verbal categories such as tense, aspect, or agreement have to be licenced by the lexical item, the verb. This means that a verb has to move to the respective functional category for its features to be checked. This is also the case for DPs. For the case features of the DPs to be checked, respective DPs have to move to a specifier-head relation with either subject agreement or inflection (AgrS/I) (for nominative case) or object agreement (AgrO) (for accusative case). Languages differ with regard to the strength of their features that trigger movement. Only strong features trigger overt movement. At some point in the derivation, the structure is submitted to Spell-Out for evaluation. If all principles of grammar are adhered to, the structure is passed to PF and then to LF. If all strong features are not checked at Spell-Out, the derivation is said to crash.

After this short overview of PP perspectives, the following subsections focus on the specific studies from two scholars who have examined locative inversion based on the perspectives of Principles and Parameters approach.

4.11.2.1 Machobane (1995)

Machobane analyzed locative inversion in Sesotho and Chichewa within the Principles and Parameters framework of generative grammar. This scholar argues that in Sesotho, in contrast to Chichewa, locatives exhibit both DP and PP properties. Her argument is based on the observation that like typical DPs, locatives can be modified by qualificative phrases, and occupy the position of subjects and objects in a sentence.

As mentioned previously, Machobane's account of locative inversion in Sesotho differs from the one presented for Chichewa. This scholar postulates that unlike Chichewa, locatives in Sesotho can be analyzed as prepositional phrases (PPs) because unlike determiner phrases (DPs), PPs cannot be associated with object agreement. She further argues that locatives introduced through the applicative do not display features of typical objects in Bantu because they cannot immediately follow the verb. The scholar points out, however, that locative PPs display subject properties. She assumes that locatives are base-generated in a VP-adjoined position. She maintains, however, that to derive their subject properties, locatives have to move to Spec-IP for checking agreement features and other properties of typical subjects in preverbal position. Regarding the postverbal theme argument, this scholar suggests that it remains in its base-generated object position, (i.e., inside VP) and it receives an oblique case from the verb.

Machobane's comparative analysis of locative inversion in Sesotho and Chichewa has not been passed unchallenged. Firstly, analysing locatives in Sesotho as PPs just because they cannot be associated with object agreement or because they appear immediately after the verb is questionable. This is because the agreement issue can simply be accounted for by the fact that Sesotho lacks productive locative nominal morphology. With regard to the inability of locatives to occur immediately after the verb, this is not uncommon in Bantu. In these languages the highest argument with respect to animacy is the one required to immediately follow the verb, rather than the applied object (cf. Salzmann 2004). In relation to the Chichewa examples, Machobane's assumption that locatives originate in adjunct position is unclear because in locative inversion constructions, locatives are commonly regarded as arguments and should, therefore, originate VP-internally.

Generally, Machobane's analysis fails to adequately characterize the properties of locative inversion construction in Sesotho and Chichewa. As a result, her account fails to capture the similarities and the differences between the two typologically related languages in relation to locative inversion. Although the arguments, i.e., the theme and the location display almost identical behaviour in both languages, she proposes different analyzes which is questionable.

4.11.2.2 Levin and Rappaport Hovav (1995)

Many studies conducted on locative inversion focus on supporting the unaccusative hypothesis (Perlmutter 1978). This view hold that verbs that undergo locative inversion are unaccusative or passive verbs (cf. Bresnan & Kanerva 1989; Hoekstra & Mulder 1990; Bresnan 1994, among others). Generally, verbs undergoing locative inversion constructions lack an external (i.e. subject) argument, and thus locative inversion has been regarded as an unaccusative diagnostic.

However, Levin and Rappaport Hovav (1995) challenge the commonly held view that locative inversion is related to unaccusativity on ground of their observation that not all unaccusative verbs participate in locative inversion. They point out that there are certain types of unergative verbs that undergo locative inversion in English. These scholars, therefore, postulate that verbs that undergo locative inversion are determined by the discourse function of the construction. They further argue that locative inversion construction is used in the discourse function of presentational focus, which restricts the verbs occurring in the construction to be informationally light. They state that if a verb contributes a substantial amount of new information, the newness of the postverbal DP decreases, and hence the construction fails to be representative. These scholars maintain that the condition for the verb undergoing locative inversion to be informationally light rules out transitive verbs, some unergative verbs, and unaccusative verbs which are not informationally light. Typical unaccusative verbs which are not informationally light according to these authors, are as exemplified in (186) (Levin & Rappaport Hovav 1995:224).

- (186) a. *on the street of Chicago *melted* a lot of snow
 b. *on backyard clotheslines *dried* the weekly washing

Levin and Rappaport Hovav propose that verbs which are informationally light, regardless of being unaccusative or unergative can undergo locative inversion, as grammaticality of examples with typical unergative verbs in (187) demonstrate (Levin & Rappaport Hovav 1995:224).

- (187) a. Behind the wheel *lounge*d a man uniformed with distinct nautical flavour
 b. At one end, in crude bunks, *slept* Jed and Henry

These scholars argue that since presentational focus naturally selects a theme locative argument structure, a scene in which a referent is introduced by change of state or location, it is obvious for the unaccusative-like distribution to occur.

Levin and Rappaport Hovav present another argument against analysing locative inversion in terms of unaccusativity. They argue that, there is no evidence syntactically that the postverbal DP occupies the direct object position. They assert that considering the VP-internal subject hypothesis, the possibility exists for the postverbal argument to remain VP-internally. With regard to unergative predicates, the discourse function or the case filter forces the logical subject to move out of the Spec-VP position, to the VP-adjoined position. In the case of unaccusatives, the same derivation is possible, particularly in cases where the theme appears to the right of a VP-internal PP. However, they acknowledge that there are cases in which the theme must occupy the object position because it precedes a VP-internal PP, as evidenced in the constituency tests in (188) (Levin & Rappaport Hovav 1995:226).

- (188) a. From one cottage emerged [VP Ian with a spade, rubber boots and an enthusiastic expression]
 b. ??Ian emerged from the cottage with a spade and Phil did so with a rake
 c. ??Ian said that he would emerge from the cottage with a spade and emerge he did with a spade

Levin and Rappaport Hovav noted, however, that the position of the postverbal subject argument might qualify as a DP position because it patterns with the subject position. Concerning locatives, they postulate that they originate VP-internally and move to subject position. These scholars give no further explanation on whether the locatives remain in such a position or topicalize.

Levin and Rappaport Hovav's analysis has some weaknesses. Firstly, the restriction of verbs that can undergo locative inversion which they propose are inconclusive, particularly in relation to Bantu languages. The discussion of locative inversion presented in this chapter has demonstrated that verbs that are found in locative inversion are less restrictive in Bantu languages compared to English. For example, in Otjiherero, it has been reported that all verbs can undergo locative inversion except ditransitives (cf. Marten 2006) (see also section 4.9.5).

Furthermore, argument structure restriction appears to be unclear when stated in terms of verbs compatible with presentational focus. This view could be well articulated in terms of argument structure rather than presentational focus. Generally, Levin and Rappaport Hovav have accounted for the majority of the properties of arguments, although these scholars do not explain adequately the distribution of locative inversion in English.

4.12 The typology and the semantics of motion verbs

Motion verbs have been typologically categorized in terms of mappings between surface structures and the semantic components (Talmy 1985, 2000). Talmy (1985) in particular asserts that motion events can be categorized into six semantic components: (i) *figure* or the moving object (e.g., *the parcel* will arrive tomorrow); (ii) *ground*: an entity or entities that the object with respect to which the figure moves, that is, the goal, source, or location of motion (e.g., the stone rolled on *the table*); (iii) *path*, or course followed by the figure with respect to the ground (e.g., he run *to* the garden); (iv) *motion*: this includes self-propelled and caused motion (e.g., he *walked* into his room); (v) *manner*: the way in which motion is performed (e.g., she *crawled* in the kitchen) and (vi) *cause*: the source of motion (e.g., he *slipped* on the floor).

Talmy (1985) postulates that based on how individual languages encode these semantic components in their lexical structures, languages can be grouped into two major classes: the first group he termed satellite-framed (S-framed) languages. These involve languages that encode manner of motion in the main verb and the path in the satellites¹¹. The second group is verb-framed (V-framed) languages. These inherently encode the path but optionally mark the manner of motion.

Talmy argues that the basic information in the motion events is that motion of an entity along a path in a specified direction. Invoking this proposition, Talmy (2000) asserts that in S-framed languages, manner is typically encoded in the verb, and the path is a satellite to the verb, as (189) demonstrates. In V-framed languages, path is encoded in the verb, while manner is encoded by a separate adjunct clause or a satellite, as exemplified in (190). Examples (189-190) are taken from Beavers et al. (2010).

(189) S-framed languages (e.g., English) John limped into the house

¹¹Satellite is defined as the grammatical category of any constituents other than a DP or PP complement that is in a sister relation to the verb root (Talmy 2000:102)

(190) V-framed languages (e.g., French)

Je suis entre dans la maison (en boitant)
 I am entered in the house (in limping)
 ‘I entered the house limping’

However, other scholars (Slobin & Hoiting 1994; Slobin 2004; Zlatev & Peerapat 2004; Ameka & Essegbey 2013) postulate a third category as an extension to Talmy’s typology. These scholars have suggested equipollent-framed (E-framed) languages. This category is basically meant to accommodate languages with serial verb constructions, in which manner and path are encoded by one or more verbs, as (191) demonstrate.

(191) E-framed languages (e.g., Emai)

Oh omohe la o vbi oa
 The man run enter at house
 ‘The man run into the house’

The classification of languages into three categories in relation to motion event encoding is not without weaknesses. Beavers et al. (2010) in particular argue that most languages can fall into two or in all of the three proposed categories. That is, a language may show both V-framed and S-framed properties, as well as E-framed pattern. These scholars postulate that there is no single parameter that determines the available options for encoding motion events across languages. They argue that the observed cross-linguistic variation cannot be reduced to a simple two- or three-way typology. They assert that languages have a set of lexical, syntactic, and morphological grammatical devices which are, however, not exclusively dedicated to motion events encoding. They argue that the relevant resources are those semantically compatible with the encoding of the components of motion events, and if available in a languages can be employed to encode such events. The identified set of grammatical devices by Beavers et al. (2010:334), is given in (192).

- (192) a. **Lexical:** manner and result verb roots/stems/affixes, spatial adpositions and particles, boundary markers
- b. **Morphological:** case markers, applicative affixes, aspectual affixes, compounding
- c. **Syntactic:** adjunction, verb serialization, subordination

These scholars argue that cross-linguistic variation of motion event encoding is a result of the options available to a particular language, thus determining its basic typological profile. They, therefore, maintain that the set of options in (192), taken together, determine that in principle languages should fall into many cross-cutting types, as many as there allowable combinations of the options in (192). They underline that the set of available options in (192) explain the attested cross-linguistic diversity in encoding motion events.

In relation to the notion of causation, Beavers et al. (2010) observe that figures of motion events and patients of change of state events can be characterised as direct internal arguments. This suggests that locative-subject alternation sentences and anticausative constructions are analogous in the sense that the change of state expressed by change of state verbs parallels the change of location/position denoted by motion and other related verbs (cf. chapters 5 & 6). In the current study, motion verbs, verbs of existence and change of state verbs presented in chapter 6 are examined assuming the view that, similarly to change of state verbs, these verbs can be construed as denoting a change of location/position.

4.13 Unaccusativity and motion verbs

Unaccusativity converges semantics and syntax of verbs, thus providing a fertile ground for exploring the relationship between lexical semantics and syntax. The term unaccusative was first defined by Perlmutter (1978) in the framework of Relational Grammar (RG), and later adopted by Burzio (1986) within the Government-Binding approach. Within Relational Grammar (RG) perspective, grammatical relations such as subject and object were regarded as denoting grammatical roles of constituents in a sentence.

Invoking GB framework, Burzio (1986) suggests that intransitive verbs are of two types: the unaccusative verbs in which their single argument is underlying direct object occurring on the surface as subject, and the unergative verbs in which their single argument is underlying subject. From the GB perspective, unergative verbs take a D-structure subject and no object, while unaccusative verbs take a D-structure object and no subject. Syntactically, the two subclasses of intransitive verbs can be represented as in (193).

- (193) a. NP [VP V] unergative e.g., she laughed
 b. [VP V NP] unaccusative e.g., she arrived

(193a) entails that unergative verbs contain an external argument but lack an internal argument. By contrast, unaccusative verbs suggest the presence of direct internal argument but lack of an external argument, as (193b) demonstrates.

Syntactically, an unaccusative verb cannot take an object with accusative case, i.e. cannot assign structural case to its object. Burzio (1986) noted a relationship between the ability of a verb to take an external argument, and its ability to assign structural case. Given this observation, an unaccusative verb has alternatively been defined as the one that does not take an external argument, thus is unable to assign a thematic role to its subject. Generally, the two definitions of unaccusativity suggest that the range of verbs involved are unaccusative verbs.

In the present study, the term unaccusative verb is defined as an intransitive verb whose single syntactic argument is not semantically an agent, in the sense that such an argument does not initiate or is not responsible for the action denoted by the verb. Based on this definition, unaccusative verbs resemble passive verbs in terms of D-structure representation. Similarly to unaccusatives, passives involve a direct internal argument but lack external argument. Given their characteristics, unaccusative verbs are widely found in locative-inversion constructions across languages (cf. Bresnan & Kanerva 1989; Hoekstra & Mulder 1990; Bresnan 1994; Levin & Rappaport Hovav 1995).

In the recent generative approach, subject and direct object are defined as DPs that receive their case by means of being in a particular structural configurations. This definition differentiates DPs that receive case from being in a relationship with a head such as prepositions that assign inherent case (Irwin 2012). Therefore, an indirect object is defined as VP-internal argument that requires structural case. This, therefore, suggests that unaccusative sentence is a sentence that has a VP-internal argument requiring structural case, and that does not have an external argument, as represented in (194).

(194) **Unaccusative sentence**

- a. - External argument
- b. + VP-internal argument requiring structural case

(194a) specifies that an unaccusative sentence structure has no constituent that is externally merged to the specifier position associated with structural case that is above VP. The structure of unaccusative verbs presented in (194b) suggests that an argument DP of an unaccusative verb sentences can originate in a number of structural positions. It has been proposed that there are two VP-internal positions that require structural case in languages like English (Irwin 2012). The two direct object

positions lead to the possibility that there are two structural ways for a clause to be unaccusative, hence resulting into two distinct unaccusative structures. Given this observation, the single argument in an unaccusative verb sentence can, therefore, be merged as a ‘standard’ object complement to a verb, or as a Small Clause (SC) subject (Moro 1997; Irwin 2012). The two proposed structures of unaccusative, are as presented in figure 12 and 13.

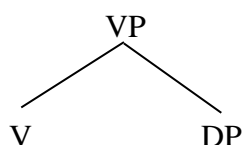


Figure 12: Standard direct object

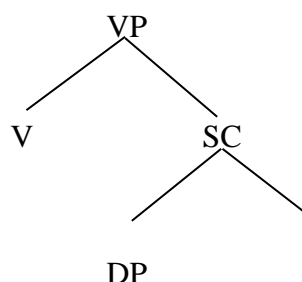


Figure 13: Small Clause subject

Both DPs in figure 12 and figure 13 are direct objects; the single argument of unaccusative sentence. They share similar characteristics in that they are VP-internal and both are in positions that require structural case. In the present study, change of location/position verbs analyzed in relation to locative-subject alternations which I consider to be unaccusative constructions employ a Small Clause (SC) analysis (cf. chapter 6 section 6.6.7). Properties of locative DPs and the DP theme of the locative-subject alternations examined in the present study prompted the adoption of the SC structure analysis as an ideal approach in characterizing these constructions in Kiwoso.

4.14 Summary

This chapter discussed grammatical relation changing constructions in Bantu languages. On the one hand, it examines passive and stative verb constructions as among prototypical and regular grammatical relation changing operations in Bantu languages. On the other hand, locative inversion constructions in Bantu languages and in English are also reviewed because across languages, these constructions change grammatical relations of sentences. The studies reviewed on passive and stative verb constructions indicate that the two operations alter the subject and the object relations in a very systematic way across Bantu languages. It has been demonstrated, however, that passive and stative operations derive semantically diverse constructions.

With regard to locative inversion, the studies reviewed demonstrate that languages differ in terms of predicates that participate in inversion constructions. Some languages such as Chichewa and Kichaga

restrict the verbs that can undergo locative inversion to unaccusative only, whereas others like Sesotho and Setswana allow all verbs except those that exhibit both agent and theme arguments. The discussed examples give evidence that Otjiherero presents the most liberal system. In Otjiherero all verbs can undergo locative inversion except ditransitives.

The studies examined demonstrate that locative inversion constructions in Bantu languages and in English, differ in terms of subject-verb agreement. In Bantu languages, the preposed locative DP in inverted sentences triggers agreement on verbs. By contrast, in English, agreement on verbs is controlled by the postverbal theme argument. However, it has been established that in both Bantu languages and in English, inversion constructions are used in the discourse context of presentational focus.

In relation to theoretical perspectives employed in locative inversion studies, two proposals have been examined, invoking Lexical Mapping Theory and Principles and Parameters approaches, respectively. It has been evidenced that although these approaches seem to be attractive in accounting for some aspects of inversion constructions in Bantu languages and in English, they are also problematic in some areas (cf. section 4.11). However, the recent innovations in the Minimalist Program provide key insights on how to account for locative inversion in languages with rich morphology like the Bantu languages. Until recently, no study has been conducted on locative inversion in Kiwoso. The present study aims to contribute to the available literature of locative inversion constructions in Bantu languages in accounting for locative-subject alternations in Kiwoso. Due to the inadequacies of previous approaches, an analysis of locative inversion sentences in Kiwoso employs the notion of Small Clause structure, in addition to the principles of minimalism to characterize change of location/position verbs in locative-subject alternations, particularly in relation to argument realization and causation.

It has also been established that change of location/position verbs found in locative inversion constructions correspond to change of state verbs found in (anti-)causative alternations in that both change of location/position and change of state verb classes are related to the notion of causation. The following chapter is devoted to the examination, analysis and the discussion of (anti-)causative constructions with change-of-state verbs in Kiwoso.

CHAPTER 5

(ANTI-) CAUSATIVE ALTERNATIONS WITH CHANGE OF STATE VERBS IN KIWOSO

5.1 Introduction

This chapter examines the characteristics of change of state verbs in Kiwoso in relation to the issues of causation, argument realization and event semantics. It has been argued by several scholars (cf. Levin 1993; Levin & Rappaport Hovav 1995; Schäfer 2008, 2009) that across languages, most verbs of change of state take part in causative and anticausative alternations. Change of state verbs examined in this chapter are assumed to be a representative sample of Levin's (1993) verb classes of change of state. The verbs examined are subcategorized into two groups: the externally caused change of state verbs, in which Levin's classes are maximally utilized; and the internally caused change of state verbs. Intuitively, externally caused change of state verbs are conceived as verbs that describe the events induced or brought about by external cause (Alexiadou et al. 2006; Schäfer 2009). On the other hand, internally caused change of state verbs are conceptualized as describing eventualities in which the change of state is due to the inherent characteristics of the entity undergoing the change of state, and nothing external is perceived to be the cause of the change (cf. Levin & Rappaport Hovav 1995; Mckoon & Macfarland 2000; Wright 2001; Alexiadou et al. 2006; Alexiadou 2014).

The notion of causation examined in this chapter relates directly to the argument alternations, particularly the (anti-)causative alternation. Kiwoso change of state verbs are characterized in relation to anticausativity, and other related types of argument alternations such as passive and middle verb constructions. It has been argued in chapter 3 section 3.1.3 that across languages, anticausative, passive and middle constructions are morphosyntactically interrelated alternations, which are however, semantically diverse. There is no systematic study which has been conducted in Kiwoso in this area. The present study aims to bridge this knowledge gap by providing a systematic and unified analysis of anticausative, passive and middle constructions so as to establish their shared characteristics in terms of morphology and syntax.

In this chapter, different change of state verbs constructions, coupled with various modifications are examined in order to determine their behaviour in relation to argument realization. It has been pointed out in chapter 1 that the grammaticality and acceptability judgement of Kiwoso constructions examined in this chapter were the result of both introspection by the researcher as well as other native speakers' intuitions. It has also been pointed out that this study examines the suitability of syntactic decomposition approach as postulated in Alexiadou et al. (2006) and Alexiadou (2010). Therefore,

in the analysis of Kiwoso change of state verbs studies by Alexiadou et al. (2006) and other related sources, as well as Smith (1997) are considered.

The rest of this chapter is organized as follows: Section 5.2 presents an overview of passive and stative constructions in relation to argument alternations in Kiwoso. It also provides the distribution of the two suffixes across semantic verb classes. Section 5.3 focuses on the externally caused change of state verbs, whereas 5.4 deals with the internally caused verbs. For proper analysis, the externally caused change of state verbs are categorized into four subsets as *break* verbs, *cut* verbs, *cook* verbs, and *bend* verbs. These subsets are presented in subsections 5.3.1-5.3.4, respectively. Section 5.5 synthesizes the analysis on argument realization and causation with regard to both externally and internally verbs of change of state, as well as aspectual verb classes. The chapter closes with a summary and conclusion in section 5.6.

5.2 Argument alternations in relation to passive and stative affixes in Kiwoso

It has been illustrated throughout chapter 4 that in Bantu languages, passive and stative suffixes are the most productive affixes which appear with most transitive verbs. Common to these affixes is that they alter the grammatical structure of the verbs to which they are attached. Across Bantu languages, the passive and the stative morphemes change the verbs' inherent content and their related arguments (cf. Rugemalira 1993, 1995; Mkude 1995, 2005). The two forms involve verbal alternations in which their sole argument is the object argument of the transitive (active) sentence, as examples from Kiwoso in (195) and (196) demonstrate.

- (195) a. *wana walekora kelya*
 wa-na wa- le- kor- a kelya
 2-child 2AGRs-PST- cook- FV 7food
 ‘The children cooked (some) food’
- b. *kelya kilekoro (na wana)*
 kelya ki- le- kor- o (na wa-na)
 7food 7AGRs-PST- cook- PASS (by 2-child)
 ‘The food was cooked (by the children)’

- c. *kelya kilekorika (*na wana)*
*kelya ki- le- kor- ik- a (*na wana)*
 7food 7AGRs-PST- cook- STAT-FV (*by 2-child)
 ‘The food became/got cooked/was cookable’ (*by 2-child)

- (196) a. *wana walebaara nungu*
wa-na wa- le- baar-a nungu
 2-child 2AGRs-PST- break-FV 9pot
 ‘The children broke the pot’

- b. *nungu ilebaaro (na wana)*
nungu i- le- baar- o (na wa-na)
 9pot 9AGRs-PST- break- PASS (by 2-child)
 ‘The pot was broken (by the children)’

- c. *nungu ilebarika (*na wana)*
*nungu i- le- bar- ik- a (*na wa-na)*
 9pot 9AGRs-PST- break-STAT-FV (*by 2-child)
 ‘The pot became/got broken/was breakable (*by the children)’

Examples in (195) and (196) demonstrate that passive and stative sentences are similar in that their syntactic subjects, *kelya* (195b-c) and *nungu* (196b-c) are the logical objects in their respective transitive sentences in (195a) and (196a). The examples also evidence that both passive and stative are intransitives, in that they involve a single argument only, namely the internal argument (theme), realized as subject, as evidenced in the examples. However, whereas the agentive role can be reintroduced in the passives via *na*-phrase ‘by-phrase’, that role is completely removed in statives, and it is unacceptable as (195c) and (196c) evidence. A similar observation has been made for several other Bantu languages such as Kivunjo (Moshi 1998), Chichewa (Dubinsky & Simango 1996; Seidl & Dimitriadis 2003; Mchombo 2004), Swahili (Mkude 1995, 2005; Lothi 2002; Seidl & Dimitriadis 2003), Ndebele (Khumalo 2009) and Nyakyusa (Lusekelo 2012, among many others).

Scholars such as Mchombo (2007) and Lusekelo (2012) postulate that the agent role cannot be reintroduced in stative constructions because statives bind together the patient/theme and agentive roles in one nominal entity. Mchombo in particular asserts that the DP subject in statives, contrary to that of passives involves attributes of certain qualities which may be inherent or acquired. He argues

that these attributes characterize the subject of statives as entering a state or condition without an implication of an agent responsible for such a state or condition. Indeed, the change of the state of the subject argument of the stative constructions is conceived as happening spontaneously, in the sense that the state or condition is happening on its own without an implication of external cause. In passives, whether overtly or covertly expressed, there is always an implication of an entity causing the change of a state or condition, as examples in (195b) and (196b) demonstrate. However, verbs suffixed with stative do not necessarily express change of state or condition of a patient/theme argument. Examples in (195c) and (196c) demonstrate that in Kiwoso, verbs with stative suffixes have an inchoative meaning as well as an ability/potentiality interpretations. The inchoative and the ability/potentiality reading of stative suffixes is also common to many other Bantu languages as evidenced for Swahili (Mkude 1995, 2005), Kagulu (Petzell 2008) and Chichewa (Dubinsky & Simango 1996; Mchombo 2004, 2007). (See also chapter 4, sections 4.5.2 and 4.6.2). It has also been demonstrated that across semantic verb classes, the stative suffix does not necessarily denote change of state. Verbs suffixed with the stative morpheme have an inchoative, ability/potentiality interpretation, and a dispositional middle meaning, as evidenced in the next subsection.

5.2.1 Passive and stative morphemes across semantic verb classes

Scholars (Rugemalira 1993, 1995; Schadeberg 2003; Mchombo 2004, 2007; Hyman 2007) have demonstrated that in most Bantu languages, passive and stative morphemes are the most productive suffixes. It has also been evidenced that in most Bantu languages, namely Chichewa (Dubinsky & Simango 1996; Mchombo 2004), Ndebele (Khumalo 2009), Swahili (Seidl & Dimitriadis 2003) and Nyakyusa (Lusekelo 2012), passive and stative suffixes are productively suffixed to transitive verbs. Dubinsky and Simango as well as Mchombo argue in particular that in Chichewa, stative suffixes do not just apply to transitive verbs, but specifically to transitive verbs which are change of state verbs. However, unlike in Chichewa where stative suffixes are restricted to change of state verbs, in Ndebele (Khumalo 2009) and Swahili (Seidl & Dimitriadis 2003) statives can co-occur with (intransitive) non-change of state verbs. This observation give evidence that the class of alternating verbs is not homogenous across or even within individual languages as also evidenced in the constructions examined in this study.

The example sentences from Kiwoso illustrate that passive and stative suffixes occur mostly with transitive verbs including verbs of change of state (cf. section 5.3). However, these suffixes can also co-occur with intransitive verbs, verbs of perception, as well as psych-verbs (verbs of psychological state). Verbs suffixed with the passive morpheme are interpreted as such, but as pointed out and

illustrated in the previous section, verbs with stative suffix are ambiguously interpreted as inchoative (a simple change of state), ability/potentiality, as well as dispositional middle. However, it should be noted that in Kiwoso, in addition to the verb's idiosyncrasy, grammatical aspects such as tense, perfective morpheme, and habitual morpheme determine the semantic interpretation of a sentence. For example, most of the verbs examined in this study demonstrate that in their simple present tense, verbs suffixed with a stative, as in (197a) and (198a) have an inchoative interpretation, while the same verbs in the past tense as in (197b) and (198b) are ambiguously interpreted as denoting inchoative or potentiality meaning. Additionally, verbs suffixed with the stative in Kiwoso can acquire a dispositional middle reading, but the given verb must necessarily combine with the habitual morpheme, and be in the simple present form, as (197c) and (198c) illustrate. (See also sections 5.3.1.4, 5.3.2.4, 5.3.3.4 and 5.3.4.4 for further discussion).

- (197) a. *kelya kyakorika*
kelya kya- kor- ik- a
 7food 7AGRs-cook-STAT- FV
 'The food gets/becomes cooked'
- b. *kelya kilekorika*
kelya ki- le- kor- ik- a
 7food 7AGRs-PST- cook- STAT- FV
 'The food got/became cooked/was cookable'
- c. *kelya kikorikaa*
kelya ki- kor- ik- a- a
 7food 7AGRs-cook- STAT- FV- HAB
 'The food cooks easily'
- (198) a. *kitabū kyasomika*
kitabū kya- som- ik- a
 7book 7AGRs-read- STAT- FV
 'The book gets/becomes read'
- b. *kitabū kilesomika*
kitabū ki- le- som- ik- a
 7book 7AGRs-PST- read- STAT- FV
 'The book got/became read/was readable'

- c. *kitabu kisomikaa*
kitabu ki- som- ik- a- a
 7book 7AGRs-read- STAT-FV- HAB
 ‘The book reads easily’

It has been pointed out that passive and stative suffixes are the most productive suffixes and can co-occur with both transitive and intransitive verbs. However, neither passive nor stative consistently co-occur with all semantic verb classes. For example, perception verbs such as *isya* ‘feel’ in Kiwoso cannot occur with passive or stative suffixes. However, there are other members of this category such as *faamya* ‘smell’, *isya* ‘hear’ that accept passive but not stative. Also, with the same category, there are verbs like *komba* ‘taste’, *lolya* ‘see’ which can take both passive and stative. The distribution of passive and stative suffixes with perception verbs is as exemplified in (199-201).

- (199) a. *wana waleesya mbyoo*
wa-na wa- le- esy- a mbyoo
 2-child 2AGRs-PST- feel- FV 9cold
 ‘Children felt cold’
- b. **mbyoo ilesyo (na wana)*
**mbyoo i- le- sy- o (na wa-na)*
 9cold 9AGRs-PST- feel- PASS (by 2-child)
 ‘*the cold was felt by the children’
- c. **mbyoo ileisika*
**mbyoo i- le- is- ik- a*
 9cold 9AGRs-PST- feel- STAT-FV
 ‘*The cold was felt’
- (200) a. *wana walefaamya mafuda*
wa-na wa- le- faamy- a mafuda
 2-child 2AGRs-PST- smell- FV 10oil
 ‘Children smelled the oil’
- b. *mafuda walefaamyo (na wana)*
mafuda a- le- faamy-o (na wa-na)
 10oil 10AGRs-PST-smell-PASS (by 2-child)
 ‘The oil was smelled (by the children)’

- c. **mafuda walefaamika*
**mafuda a- le- faam- ik- a*
 10oil 10AGRs-PST- smell- STAT-FV
 ‘*The oil got/became smelled’
- (201) a. *wana walekomba chumbi*
wa-na wa- le- komb- a chumbi
 2-child 2AGRs-PST- taste- FV 9salt
 ‘The children tasted the salt’
- b. *chumbi ilekombo na wana*
chumbi i- le- komb- o na wa-na
 9salt 9AGRs-PST- taste- PASS by 2-child
 ‘The salt was tasted by the children’
- c. *chumbi ilekombika*
chumbi i- le- komb- ik- a
 9salt 9AGRs-PST- taste- STAT-FV
 ‘The salt was tastable’

Notice that the interpretation of the verb *komba* ‘taste’ with stative suffix does not yield a change of state meaning. The verb has an ability/potentiality meaning, as the gloss indicates.

Psych-verbs are also examined in relation to passivization and stativization. It has been established that most “positive” psych-verbs accept both passive and stative suffixes (202), whereas majority of “negative” psych-verbs do not co-occur with the stative morpheme, as exemplified in (203). However, there are verbs such as *sumbuo* ‘trouble’ which is compatible with both passive and stative (204) and *owo* ‘fear’, *arara* ‘insult’ which allow passive but not stative, as illustrated in (203).

- (202) a. *wana waleeshimu wasasi*
wa-na wa- le- eshimu wasasi
 2-child 2AGRs-PST- respect 2-parent
 ‘Children respected the parents’
- b. *wasasi waleeshimyo (na wana)*
wa-sasi wa- le- eshimy-o (na wa-na)
 2-parent 2AGRs-PST- respect-PASS (by 2-child)
 ‘The parents were respected (by the children)’

- c. *wasasi waleeshimika*
wa-sasi wa- le- eshim- ik- a
 2-parent 2AGRs-PST- respect-STAT-FV
 ‘The parents were/became/got respected’
- (203) a. *wana walearara bheenu*
wa-na wa- le- arar- a bha- inu
 2-child 2AGRs-PST- insult- FV 2- visitor
 ‘Children insulted the visitors’
- b. *bheenu waleararo (na wana)*
bha-inu wa- le- arar- o (na wa-na)
 2-visitor 2AGRs-PST- insult- PASS (by 2-child)
 ‘The visitors were insulted (by the children)’
- c. **bheenu waleararika*
**bha-inu wa- le- arar- ik- a*
 2-visitor 2AGRs-PST- insult- STAT-FV
 ‘*Visitors got/became insulted’
- (204) a. *manini walesumbwo wandu*
ma-nini wa- le- sumbu-o wa-ndu
 6-thief 6AGRs-PST-disturb-PASS 2-person
 ‘Thieves disturbed people’
- b. *wandu walesumbuo (na manini)*
wa-ndu wa- le- sumbu-o (na ma-nini)
 2-person 2AGRs-PST- disturb-PASS (by 6-thief)
 ‘People were disturbed (by the thieves)’
- c. *wandu walesumbuka*
wa-ndu wa- le- sumb- uk- a
 2-person 2AGRs-PST- disturb-STAT-FV
 ‘People got/became disturbed’

Notice that in (204c) the verb *sumbuka* has an inchoative interpretation. In other words, the stative suffix induced the change of state interpretation. This is contrary to the verb *kombika* ‘be tastable’ which denotes a state interpretation, rather than a change of a state. This is an indication that the stative suffix in Kiwoso is not only associated with the change of state meaning, but has multiple interpretations depending on the verbal root to which it is suffixed.

Intransitive motion verbs such as run, arrive, return, sit, walk, dance, go, fall, come, are widely crosslinguistically not supposed to passivize or stativize by virtue of their lexical-semantics (Levin & Rappaport Hovav 1995; Lusekelo 2008). However, in Kiwoso, members of this class such as *enda* ‘go’, *fika* ‘arrive’, *dicha* ‘run/escape’ *damya* ‘sit’ accept passive and stative suffixes, as evidenced in (205).

- (205) a. *wandu waledamya kidi*
 wa-ndu *wa-* *le-* *damy-* *a* *kidi*
 2-person 2AGRs-PST- sit- FV 7chair
 ‘People sat on the chair’
- b. *kidi kiledamyo (na wandu)*
 kidi *ki-* *le-* *damy-* *o* (*na* *wa-ndu*)
 7chair 7AGRs-PST- sit- PASS (by 2-person)
 ‘On the chair was sat (by the people)’
- c. *kidi kiledamika*
 kidi *ki-* *le-* *dam-* *ik-* *a*
 7chair 7AGRs-PST- sit- STAT-FV
 ‘The chair was sitable’

However, within the same class, verbs such as *wuya* ‘return’ and *woo* ‘fall’ do not co-occur with the stative, although they can be passivized, as exemplified in (206).

- (206) a. *wana walewuya bo*
 wa-na *wa-* *le-* *wuy-* *a* *bo*
 2-child 2AGRs-PST- return- FV 9home
 ‘Children returned home’

- b. *bo ilewuyo (na wana)*
bo i- le- wuy- o (na wana)
 9home 9AGRs-PST- return- PASS (by 2-child)
 ‘Home was returned by the children’
- c. **bo ilewuyika*
**bo i- le- wuy- uk- i*
 9home 9AGRs-PST- return- STAT-FV
 ‘*Home was returnable’

The examination of verb alternations across semantic classes illustrates that although members of the same class are semantically related, they are not identical. It has been evidenced that members within the same class behave differently in terms of argument alternations. The verbs examined illustrate that within the same semantic verb classes there are members that passivize and stativize (see examples 201, 202, 204 and 205); others accept passive but not stative (cf. examples 201, 203 and 206) and there are verbs that do not permit either passive or stative, as evidenced in example (199). On the one hand, this observation suggests that semantic verb classes do exist, and verbs can generally be characterized based on semantic verb classes. On the other hand, the observed state of affairs implies that each verb, irrespective of the semantic classes behaves differently depending on its encyclopaedic characteristics.

Having illustrated the overall distribution of passive and stative suffixes across semantic verb classes in Kiwoso, the following section examines externally caused change of state verbs in relation to argument alternation constructions such as passive, anticausative and middle, in which passive and stative suffixes form an important factor of these alternations.

5.3 Externally caused change of state verbs

Change of state verbs of which the majority fall under externally caused change of state verbs, are characterized as alternating verbs in that they exhibit both transitive/causative and intransitive/anticausative uses. In their transitive use, these verbs demonstrate that the eventualities described are brought about by some external cause, whereas in their intransitive construal the verbs denote the events in which the change of state described come about independently. The causative and anticausative variants of externally caused change of state verbs share some thematic relations (or arguments) in that the subject of the intransitive variant and the object of the transitive variant are

the themes/patients. This property makes anticausative similar to passive and middle constructions. Externally caused change of state verbs exhibit different characteristics in terms of argument realization. Therefore, for proper analysis, these verbs are categorized into four subclasses, namely *break*, *cut*, *cook* and *bend* verbs.

Because it is impractical in this study to present the examples of all class members, one verb is selected from each class and subclasses as representative sample of the other members in the class. It has also been pointed out that various diagnostics are employed in the case of each member of the respective classes. However, members of the same class may behave differently when they co-occur with certain modifications. If this occurs, the variation will be pointed out and discussed accordingly in the body of the text for easy reference. If all members display similar patterns, one verb will be exclusively used as a representative example, and the rest of the constructions will be provided as an appendix.

5.3.1 *Break verbs*

Cross-linguistically, *break* verbs are the prototypical change of state verbs. Hale and Keyser (1987) characterize *break* verbs as actions that bring about a change in the material integrity of some entity. *Break* verbs, like other members of verbs of change of state, denote changes in the physical appearance of entities. Kiwoso *break* verbs such as *baara* ‘break’, *saka* ‘grind’, *aswo* ‘crack’, and *ratwo* ‘tear’ are examined in terms of their (anti-)causative, passive and middle properties. In order to characterize argument realization patterns of these argument alternation types, different diagnostics are employed, as the discussions in subsections 5.3.1.1-5.3.4.1, 5.3.1.2-5.3.4.2, 5.3.1.3-5.3.4.3 and 5.3.1.4-5.3.4.4 illustrate. However, as pointed out earlier in this chapter, the discussion focuses on *baara* ‘break’ as a representative sample of other members of this class.

5.3.1.1 The causative variants

It has been noted that the external argument position of change of state verbs can be realized by different types of subjects (Alexiadou & Schäfer 2006). In the analysis of causative forms of *break* verbs in Kiwoso, different external arguments such as agent, instrument and natural force (causers) have been examined in the causative sentences. In order to validate the suitability of these external arguments in subject position, standard subject diagnostics have been used in combination with other phrase modifications, as demonstrated in the subsections that follow.

5.3.1.1.1 Agent as subject/external causer

Kiwozo *break* verbs demonstrate that agent can be a subject in the causative constructions, as evidenced in (207).

- (207) *waka walebaara nungu*
 wa-ka *wa-* *le-* *baar-a* *nungu*
 2-woman 2AGRs-PST- break-FV 9pot
 ‘Women broke the pot’

The noun *waka* ‘women’ in (207) denotes an agent of the event described by the verb. Such an agent is perceived as the cause of change of state undergone by the theme, i.e the breaking of the pot. Generally, all *break* verbs in Kiwozo demonstrate that agent is an acceptable argument as an external cause of the change of state in causative constructions.

5.3.1.1.2 Instrument as subject/external causer

Causative variants were also examined in relation to instrument as subject. The findings demonstrate that instrument is a possible external argument of *break* verbs, as illustrated in (208). In Kiwozo, the instrument ‘*iwee*’ is interpreted as a causer of change of state by virtue of being eventive without necessarily being under the control of a human agent.

- (208) *iwee lyilebaara nungu*
 iwee *lyi-* *le-* *baar-* *a* *nungu*
 5stone 5AGRs-PST- break- FV 9pot
 ‘The stone broke the pot’

5.3.1.1.3 Natural force as subject/external causer

Unlike for agent and instrument arguments, *break* verbs exhibit variation with regard to noun phrases denoting natural force as an external argument. Whereas all other members accept natural force as an external argument, the verb *saka* ‘grind’ cannot co-occur with natural force as its subject, as the semantic anomaly of example (210) exemplifies.

- (209) *upepo lulebaara nungu*
 upepo *lu-* *le-* *baar-* *a* *nungu*
 11wind 11AGRs-PST-break- FV 9pot
 ‘The wind broke the pot’

- (210) *#upepo lulesaka umbi*
upepo lu- le- sak- a umbi
 11wind 11AGRs-PST- grind- FV 9millet
 ‘The wind ground the millet’

Notice that whereas *upepo* ‘wind’ is an acceptable external argument in (209), it is unacceptable in (210). This entails that events are construed differently, thus external argument realization mostly depends on the conceptualization of eventualities. The verb *saka* ‘grind’ denotes an eventuality which is human-oriented, and hence requires volitional agent as an external cause of the event.

5.3.1.1.4 Agent-oriented phrase modification

The external argument such as an agent has been used in combination with other phrase modifications in order to determine its validity as subject. The findings demonstrate that all causative variants of *break* verbs accept agent-oriented adverbials such as *ko ngufu* ‘forcefully’, as (211) illustrates.

- (19) *waka walebaara nungu (ko ngufu)*
wa-ka wa- le- baar- a nungu (ko ngufu)
 2-woman 2AGRs-PST- break- FV 9pot (with force)
 ‘Women broke the pot (forcefully)’

5.3.1.1.5 Purpose clause modification

Purpose clause modification is also used as a diagnostic for agentivity. *Break* verbs in Kiwoso demonstrate that a purpose clause is appropriate modifier of causative sentences, as (212) exemplifies.

- (212) *waka walebaara nungu (kusudi walakore)*
wa-ka wa- le- baar- a nungu (kusudi walakore)
 2-woman 2AGRs-PST- break- FV 9pot (so that they don’t cook)
 ‘Women broke the pot (so that they don’t cook)’

5.3.1.1.6 Temporal phrase modification

In its simple verb constellation, the causative variant of *break* verbs denote an Achievement event. However, when modified by time-frame adverbial *sekunde* ‘in a second’ sentences with these verbs shift from Achievement to Accomplishment events. Note that *break* verbs indicate instantaneous

events and, therefore, do not co-occur with (atelic) durative adverbials such as *ko sekunde*, ‘for a second’ as illustrated by the unacceptability of such a modifier in (213).

- (213) a. *waka walebaara nungu (*ko sekunde)/(sekunde)*
*wa-ka wa- le- baar- a nungu (*ko sekunde)/(sekunde)*
 2-woman 2AGRs-PST- break- FV 9pot (for second)/(second)
 ‘Women broke the pot (*for a second)/ (in a second)’
- b. *waka walemebaara nungu (*ko sekunde)/(*sekunde)*
*wa-ka wa- le- me- baar- a nungu (*ko sekunde)/(*sekunde)*
 2-woman 2AGRs-PST- PERF- break- FV 9pot (*for second)/(*second)
 ‘Women had (already) broken the pot (*for a second)/ (*in a second)’

In its imperfective form, the sentence in (213a) asserts that the event is still ongoing and it has not reached its final endpoint. In Kiwoso, such a sentence has a process interpretation. On the other hand, when the same verb occurs with a perfective aspect, it receives a result state interpretation. This interpretation is validated through temporal modifiers in (213b), as well as manner adjuncts, which are incompatible with a sentence with a result state interpretation (cf. example (214b)).

5.3.1.1.7 Manner/Instrument adjunct modifications

The causative variants of the externally caused change of state verbs examined in Kiwoso illustrate that all members can co-occur with manner as well as instrument adjuncts, as evidenced below.

- (214) a. *waka walebaara nungu (bhicho)/(neewee)*
wa-ka wa- le- baar- a nungu (bhicho)/(na iwee)
 2-woman 2AGRs-PST- break- FV 9pot (bad)/(by stone)
 ‘Women broke the pot (badly)/ (with a stone)/ (by means of a stone)’
- b. *waka walemebaara nungu (*bhicho)*
*wa-ka wa- le- me- baar- a nungu(*bhicho)*
 2-woman 2AGRs-PST-PERF break- FV 9pot (*bad)
 ‘Women had broken the pot (*badly)’

Notice that the manner adjunct *bhicho* ‘badly’ and the instrument adjunct *neewee* ‘by a stone’ provide information on ‘how’ an agent performs the event. It has also been evidenced that the co-occurrence

of manner adjuncts with change of state verbs in Kiwoso is determined by the grammatical aspect of a sentence. A manner adjunct cannot co-occur in a sentence with a perfective or result state interpretation as example (214b) demonstrates. Causative verb in its simple past as in (214a) denotes process event, hence accepts manner adjuncts, whereas the verb in a perfect tense denotes an event with logical culmination which is interpreted as a result state, thus incompatible with manner adjunct modification.

5.3.1.2 The anticausative variants

It has been pointed out earlier in this chapter that change of state verbs have transitive (causative) and (intransitive) anticausative uses. In Kiwoso, *break* verbs as prototypical change of state verbs exhibit anticausative features. In this language, the anticausative alternates of externally caused change of state verbs are characterized by the stative suffix *-ik-* (and its related forms), as an element that prohibits the assignment of external theta roles in anticausative sentences. The example sentences from Kiwoso demonstrate that the causative and anticausative variants differ in terms of argument realization, as the diagnostics presented in the following subsections evidence.

5.3.1.2.1 Instrument as subject

The anticausative variants of *break* verbs examined in Kiwoso demonstrate that contrary to causative variants, they are incompatible with an agent, instrument, and natural force as their external arguments. However, the verb *saka* ‘grind’ is unique in that, the instrument, especially under modification can function as subject, as (215) evidences. The instrument subject *isebhe* ‘grinding stone’ in (215) is conceived as a potential or possible means for the event occurrence.

- (215) *isebhe (lyi) lyasakika umbi*
isebhe (lyi) lya- sak- ik- a umbi
 5grinding stone (this) 5AGRs-grind- STAT-FV 9millet
 ‘(This/the) grinding stone became ground millet’

5.3.1.2.2 Prepositional phrase modification

It has been noted that across languages, anticausative variants licence specific prepositions introducing causer arguments (cf. Pustejovsky 1995; Alexiadou et al. 2006, 2015; Kallulli 2007; Schäfer 2008). The change of state verbs examined in this section demonstrate that the anticausative variants of *break* verbs in Kiwoso can be modified by causers and instrument when introduced by a *ko-phrase*. However, while all other identified *break* verbs are compatible with all the modifiers, as

in (216), natural force modification is unacceptable with the verb *saka* ‘grind’, as exemplified in (217).

(216) *nungu ilebarika (ko waka)/(kweewe)/(koopepo)*

nungu i- le- bar- ik- a (ko wa-ka)/(ko i-wee)/(ko upepo)

9pot 9AGRs-PST- break-STAT- FV (to 2-woman) (by 5stone)/ (from 5wind)

‘The pot became broken (to the potentiality of women)/ (through stone)/ (from wind)’

(217) *umbi ulesakika (ko waka)/(kweesebhe)/(*koopepo)*

*umbi u- le- sak- ik-a (ko wa-ka)/ (ko isebhe)/ (*ko upepo)*

9millet 9AGRS-pst- grind- stat-FV (to 2-woman)/ (by 5grinding stone)/ (*by 5wind)

‘Millet became ground (to the ability of the women)/ (through grinding stone)/ (*from wind)’

In (216), *baara* ‘break’ is compatible with causers and instruments as event modifiers. On the other hand, *saka* ‘grind’ cannot co-occur with a natural force, as (217) demonstrates. This implies that *saka* ‘grind’ instantiates human oriented activity and expressions like natural force lack control over such eventualities, as the causative variant in 5.3.1.1.3 also illustrates.

5.3.1.2.3 Agent-oriented adverbial modification

Break verbs analyzed in this study demonstrate that the anticausative variants of these verbs do not allow agent-oriented adverbials as the sentences with the verb *baara* ‘break’ in (218) illustrates. It should be noted that anticausative sentences in Kiwoso lack agentive inferences and, therefore, agent-oriented adverbials cannot be accessed, as evidenced in (218).

(218) *nungu ilebarika (*ko makusudi)*

*nungu i- le- bar- ik- a (*ko makusudi)*

9pot 9AGRs-PST- break- STAT-FV (with purpose)

‘The pot became broken (*intentionally)’

5.3.1.2.4 Purpose clause modification

The examples sentences examined illustrate that unlike causative variants, anticausative forms of break verbs in Kiwoso cannot be modified by a purpose clause, as example (219) demonstrates.

- (219) *nungu ilebarika (*kusudi ilatumike)*
*nungu i- le- bar- ik- a (*kusudi ilatumike)*
 9pot 9AGRs-PST break- STAT-FV (*so that it is not used)
 ‘The pot became/got broken) (*so that it is not used)’

The sentence in (219) demonstrates that anticausatives are infelicitous with a purpose clause which reflects the absence of agentivity in anticausatives.

5.3.1.2.5 Temporal adjuncts modification

Basically, the anticausative variants of *break* verbs denote a state event in terms of aspectual properties. However, time-frame adverbial such as *sekunde* ‘second’ alters the aspectual classes from State to Accomplishment. Durative time adverbials are incompatible with anticausatives, as (220a) demonstrates.

- (220) a. *nungu ilebarika (*ko sekunde)/(sekunde)*
*nungu i- le- bar- ik- a (*ko sekunde)/(sekunde)*
 9pot 9AGRs-PST- break- STAT-FV (*for second)/(in second)
 ‘The pot got/became broken (*for a second)/(in a second)’
- b. *nungu ilemebarika (*ko sekunde)/(*sekunde)*
*nungu i- le- me- bar- ik- a (*ko sekunde)/(*sekunde)*
 9pot 9AGRs-PST- PERF- break- STAT-FV (*for second)/(in second)
 ‘The pot had gotten/become broken (*for a second)/(in a second)’

Sentence (220a) with time-frame adverbial *sekunde* ‘second’ has the interpretation that the event of breakage was completed in the extent of a second. However, similar to the causative variant of the *break* verbs, the anticausative form in the perfective aspect cannot co-occur with temporal adverbials. In its perfective aspect, the sentence entails that the event has reached its endpoint and, therefore, cannot be modified by temporal adverbials, as the ungrammaticality of both durative and frame adverbials in (220b) illustrates.

5.3.1.2.6 Causing event modification

Although it is uncommon for the anticausatives to co-occur with agentive modifiers, studies demonstrate that crosslinguistically, anticausatives are compatible with causing event modification

(see Alexiadou et al. 2006, 2015; Zombolou 2004; Schäfer 2008). The anticausative constructions of *break* verbs in Kiwoso demonstrate that causing event modification is acceptable, as (221) exemplifies.

- (221) *nungu ilebarika (kweekorya(ho) kila siku)*
nungu i- le- bar- ik- a (kweekorya(ho) kila siku)
 9pot 9AGRs-PST- break- STAT-FV (by cooking everyday)
 ‘The pot became/got broken (by cooking (in it) every day)’

The clause *kweekoryaho kila siku* modifies the event rather than the external argument. However, this clause illustrates vividly that similar to causative variants, anticausative variants involve causation. The causing event modification focuses more on ‘how’ of the event which implicitly carries the cause notion of the event.

5.3.1.2.7 Reason clause modification

The *break* verbs examined in this study evidence that the anticausative forms of these verbs are compatible with reason clauses, as example (222) illustrates.

- (222) *nungu ilebarika (ko sababu ya uku)*
nungu i- le- bar- ik- a (ko sababu ya uku)
 9pot 9AGRs-PST- break- STAT-FV (because of wearing out)
 ‘The pot became/got broken (because of wearing out)’

5.3.1.2.8 Manner/ Instrument adjunct modification

As for the causative variants of the *break* verbs discussed in 5.2.1.1, anticausative variants of the verbs examined are felicitous with both manner and instrument adjuncts, as exemplified by *baara* ‘break’ in (223a).

- (223) a. *nungu ilebarika (bhicho)/ (kweewee lyingane)*
nungu i- le- bar- ik- a (bhicho)/kweewee lyingane
 9pot 9AGRs-PST- break-STAT-FV (bad)/ by stone big
 ‘The pot became broken (badly)/ (through a big stone)’

- b. *nungu ilemebarika (*bhicho)*
*nungu i- le- me- bar- ik- a (*bhicho)*
 9pot 9AGRs-PST- PERF- break-STAT-FV (*bad)
 ‘The pot had gotten/become broken (*badly)’

Notice that while manner and instrument adjuncts modify an agent argument in causative variants (see section 5.3.1.1.7, example 214), in anticausatives, instrument and manner adjuncts modify the entire event. Similarly to the causative variant, the anticausative variant in the perfective aspect is incompatible with a manner adjunct, as evidenced in (223b). Like the causative variant, the anticausative form with the simple verb (223a) denotes process event and entails that the event has not reached its final endpoint, whereas a sentence with perfective aspect denotes result state, and has the interpretation that the event has been completed (223b).

5.3.1.3 The passive forms

The passive constructions of *break* verbs analyzed in this study display similar characteristics with the causative variants in that they can express all types of external arguments, namely agents, instruments, and causers. In Kiwoso passive sentences, external arguments are introduced by a *na*-phrase, as demonstrated in the following subsections.

5.3.1.3.1 Passives with prepositional phrase modification

The findings of this study demonstrate that passives license agent, instrument, as well as natural force, as (224) exemplifies. However, the verb *saka* ‘grind’ does not co-occur with natural force as also evidenced in 5.2.1.1.3 with transitive variant.

- (224) *nungu ilebaaro (na wana)/(neewee)/(noopepo)*
nungu i- le- baar- o (na wa-na)/(na iwee)/(na upepo)
 9pot 9AGRs-PST- break- PASS (by 2-child)/(by 5stone)/(by wind)
 ‘The pot was broken (by the children)/(by the stone)/(by the wind)’

Example (224) illustrates that implicit arguments are realized by a *na*-phrase in Kiwoso. This phrase points to the agent argument in passives. Generally, across languages, passive contains implicit argument which can be reintroduced in the syntax (cf Alexiadou et al. 2006, Schäfer 2008). In most Bantu languages, the implicit argument in passive is reintroduced by special elements as the

discussion on passive verb constructions in chapter 4 evidences, and also as examples from Kiwoso demonstrate.

5.3.1.3.2 Agent-oriented adverbial modification

The passive variants of *break* verbs analyzed in Kiwoso demonstrate that all members can be modified by agent-oriented adverbials, as exemplified by the verb *baara* ‘break’ in (225). The acceptability of modifiers like *kitondo* ‘foolishly’ point to the presence of agent argument which is understood in passives.

- (225) *nungu ilebaaro (kitondo)*
nungu i- le- baar- o (kitondo)
 9pot 9AGRs-PST- break- PASS (with foolish)
 ‘The pot was broken (foolishly)’

5.3.1.3.3 The purpose clause modification

Passive forms of the *break* verbs are also examined in relation to purpose clause modification. The results demonstrate that passives license purpose clause modification, as (226) exemplifies. The acceptability of the purpose clause reflects the presence of volitional agent which has control over the event.

- (226) *nungu ilebaaro (kusudi iurwe ingi)*
nungu i- le- baar- o (kusudi iurwe ingi)
 9pot 9AGRs-PST- break- PASS (so that bought another)
 ‘The pot was broken (so that it is bought another one)’

5.3.1.3.4 Temporal adjunct modification

Similarly to transitive variants, the passive forms of *break* verbs are infelicitous with durative adverbials. However, passives are compatible with a time-frame adjunct, though with a different interpretation. It has been pointed out above that *break* verbs denote Achievement events but when they co-occur with a completive adverbial they shift into Accomplishments, as demonstrated in (227). Also, the passive form of the verb *break* in its perfective aspect cannot co-occur with either durative or frame adverbial because a sentence denotes an event with logical endpoint, as (227b) demonstrates.

- (227) a. *nungu ilebaaro (*ko dakika)/(dakika)*
*nungu i- le- baar- o (*ko dakika)/(dakika)*
 9pot 9AGRs-PST- break- PASS (for minute)/(minute)
 ‘The pot was broken (*for a minute)/(in a minute)’
- b. *nungu ilemebaaro (*ko dakika)/(*dakika)*
*nungu i- le- me- baar- o (*ko dakika)/(*dakika)*
 9pot 9AGRs-PST- PERF- break- PASS (*for minute)/(minute)
 ‘The pot had been broken (*for a minute)/(in a minute)’

5.3.1.3.5 Manner/Instrument adjuncts modification

Manner and adjunct adverbials fair well with the passive forms of the *break* verbs in Kiwoso. Similarly to the transitive counterparts, these adjuncts modify an external argument which is implicit in passives. On the other hand, in its perfective aspect, a passive sentence denotes a result state, and hence it is incompatible with a manner adjunct, as evidenced in (228b).

- (228) a. *nungu ilebaaro (bhicho)/(neewee)*
nungu i- le- baar- o (bhicho)/(na iwee)
 9pot 9AGRs-PST- break- PASS (bad)/(by stone)
 ‘The pot was broken (badly)/(by (the use of) a stone)’
- b. *nungu ilemebaaro (*bhicho)*
*nungu i- le- me- baar- o (*bhicho)*
 9pot 9AGRs-PST- PERF- break- PASS (*bad)
 ‘The pot had (already) been broken (*badly)’

5.3.1.4 Middle constructions

Across languages, the morphosyntax of the middle construction is similar and closely relates to other constructions such as passives and anticausatives (see Schäfer 2008, 2009). It has been pointed out in chapter 4 that middle, passive, and anticausative constructions are operations that change the grammatical relations of arguments. In all these alternations, the underlying verb’s internal arguments surface as the grammatical subjects, that is, the entities that are affected or those that undergo the change of a state described in the sentence.

Schäfer (2008) postulates that if a language uses some morphological device to mark anticausatives, it is the same device used to form middles in that language, and if the language lacks marked anticausatives, middles are also unmarked. This prediction is borne out in Kiwoso in that similarly to anticausatives, middle constructions in Kiwoso are marked by the stative morpheme *-ik-*. However, unlike anticausatives, middle sentences obligatorily involve the habitual morpheme *-a-* which denotes the generic meaning of these constructions. Example (229) is illustrative of middle sentences in Kiwoso.

(229) *nungu (i) ibarikaa*

nungu (i) i- bar- ik- a- a
 9pot (this) 9AGRs-break-STAT-FV- HAB
 ‘This pot breaks (easily)’

Generally, middles are non-episodic in the sense that they do not refer to the actual happening; rather, middle sentences quantify over the grammatical subject, i.e. the theme. Thus, example (229) demonstrate that it is the property of the grammatical subject which makes the event denoted by the verb possible, or potential. On the other hand, the interpretation gained from the above middle construction is that the grammatical subject *nungu* ‘pot’ has certain characteristics that make anyone capable of breaking it without difficulty. It was demonstrated that native speakers of Kiwoso rate the potentiality reading of middle constructions as more felicitous when the grammatical subjects of the constructions are modified or rather specified by demonstratives ‘this’ or ‘that’, as evidenced in (229). However, the informants reported that the absence of such modifiers does not render the sentence ungrammatical or alter the interpretation. The findings of the study demonstrate further that unlike anticausatives, middle sentences lack specific time reference, thus they are incompatible with the past tense, as (230) illustrates.

(230) **kikombe kilebarikaa*

kikombe ki- le- bar- ik- a- a
 7cup 7AGRs-PST- break- STAT- FV- HAB
 ‘*The glass got/became broken easily’

Diagnostics such as agent-oriented adverbial modifiers, purpose clause and PP modifications have been employed in middle constructions in order to establish their external argument realization patterns. The example sentences demonstrate that agent-oriented adverbials, and purpose clause

modifiers, as exemplified in (231) are unacceptable in middle constructions. A similar observation is made for the anticausative constructions discussed in subsection 5.3.1.2. However, other modifiers introduced by *ko*-phrase, as in (232) are acceptable.

(231) *nungu ibarikaa (*kirango)/(*kusudi ilakore kelya)*

*nungu i- bar- ik- a- a (*kirango)/(*kusudi ilakore kelya)*

9pot 9AGRs-break-STAT-FV- HAB (with clever)/ (*so that does not cook food)

‘The pot breaks (*cleverly)/ (*so that it doesn’t cook food)’

(232) *nungu ibarikaa (*na womi)/(ko womi)*

*nungu i- bar- ik- a- a (*na womi)/(ko womi)*

9pot 9AGRs-break-STAT-FV- HAB (*by men)/(to men)

‘The pot breaks (easily) (*by men) (to the ability/potentiality of men)’

The construction in (231) illustrate clearly that middles cannot be modified by an agent-oriented adverbial or control into purpose clause. This implies that middles do not involve the type of implicit external arguments found with passives (see section 5.3.1.3). On the other hand, example (232) demonstrates that middles can realize other modifiers when introduced by *ko*-phrase, but they are illicit with *na*-phrase which carries agentive features.

This section presents *break* verbs sub-categories of externally caused change of state verbs in Kiwoso. It has been established that *break* verbs can appear with causatives, passives, anticausative, as well as dispositional middle constructions. The results demonstrate that *break* verbs except the verb *saka* ‘grind’ realize agents, instruments, and natural forces as external arguments in causative and passive variants. The findings demonstrate that whereas passives realize implicit arguments via a *na*-phrase with agentive features, in anticausative and middle sentences, these arguments are introduced exclusively by a *ko*-phrase and they are mainly conceptualized as the modifiers of events. Table 22 provides the summary of the diagnostics used with *break* verbs in Kiwoso.

ECCSV in Kiwoso	CAUSATIVE											PASSIVE											ANTICAUSATIVE											MIDDLES							
	DIAGNOSTICS											DIAGNOSTICS											DIAGNOSTICS											DIAGNOSTICS							
	Agent	Instrument	Causers	Agent-adv	Purpose clause	Reason clause	Tem .adj		Causing event	Instrument-adj	Manner-adj	Agent	Instrument	Causers	Agent-aadv	Na- phrase	Purpose clause	Reason clause	Tem .adj		Causing event	Instrument-adj	Manner-adj	Agent	Instrument	Causers	Agent-adv	Ko- phrase	Purpose clause	Reason	Tem. adj		Causing event	Instrument-adj	Manner-adj	Agent-adv	Purpose clause	PPs			
							For-	In-adj											For-adj	In-adj											For	In-adj						ko	na		
<i>baara</i>	✓	✓	✓	✓	✓	✓	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	✓	✓	✓	✓	*		*	*	✓	*	✓	*	✓	✓	✓	*	*	✓	*	✓	*	
<i>saka</i>	✓	✓	#	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	*	✓	*	✓	*	✓	✓	✓	✓	*	*	✓	*	✓	*
<i>aswo</i>	✓	✓	✓	✓	✓	✓	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	✓	✓	✓	✓	*	*	*	*	✓	*	✓	*	✓	✓	✓	✓	*	*	✓	*	✓	*
<i>ratuo</i>	✓	✓	✓	✓	✓	✓	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	✓	✓	✓	✓	*	*	*	*	✓	*	✓	*	✓	✓	✓	✓	*	*	✓	*	✓	*

Table 22: Summary of *break* verbs with various modifiers in Kiwoso

5.3.2 *Cut verbs (verbs of cutting)*

Hale and Keyser (1987) define *cut* verbs as actions that bring about separation in the material integrity of an entity. Similar to *break* verbs discussed in section 5.3.1, *cut* verbs bring about a change of physical look. However, *cut* verbs are unique in that they specify the means employed to bring about the change of a state which implicitly point to the presence of external cause, particularly an agent (cf. Levin & Rappaport Hovav 1995).

The verbs of *cutting* examined in Kiwoso include *manya* ‘cut’, *racha* ‘slash’, *randa* ‘saw’ and *dummba* ‘cut’. These verbs exhibit properties of change of state, and they occur in various verbal alternations. The discussion of *cut* verbs in relation to argument alternations and argument realization discussed in this section focuses on one member, *manya* ‘cut’ as a representative sample of the class.

5.3.2.1 The causative variants of *cut* verbs

The *cut* verbs examined in Kiwoso, similarly to other change of state verbs, participate in a causative event. In causative forms, these verbs license agent and instrument as their external arguments. However, natural force is illicit in all constructions of *cut* verbs. External argument diagnostics, together with other modification types, are presented and discussed in the following subsections.

5.3.2.1.1 Agent/Instrument as external argument

(233) *Leka/kyaara (nya)/(ki)lemanya n’ji*

Leka *ni-* (*a*)/-(*ki*) *le-* *many-* *a* *n’ji*

Leka INIT- 1/7AGRs- PST- cut- FV 3tree

‘(*Leka*)/ (the axe) cut the tree’

In (233) *Leka* denotes an agent argument, while *kyaara* ‘axe’ is an instrument argument. Notice that in (233), *kyaara* ‘axe’ is construed to be under the control of an agent argument. Generally, all events related to cutting in Kiwoso involve a certain instrument.

5.3.2.1.2 Natural force as external argument

There are verbs which, by virtue of their lexical semantics, cannot co-occur with argument denoting natural forces. This is the case with *cut* verbs in Kiwoso. All causative variants of *cut* verbs examined demonstrate that natural forces are incompatible with these verbs. In terms of

their conceptualization, the eventualities described by *cut* verbs in Kiwoso involve an instrument and intentional agent as obligatory participants. Therefore, natural force is unacceptable because it is incapable of carrying out the eventualities denoted by these verbs, as the unacceptability of sentence (234) illustrates.

- (234) *#upepo lulemanyanya n'ji*
upepo lu- le- many- a n'ji
 11wind 11AGRs-PST-cut- FV 3tree
 'The wind cut the tree'

5.3.2.1.3 Agent-oriented adverbial modification

It has been established that *cut* verbs in Kiwoso are prototypically agentive. Therefore, all examined causative sentences of *cut* verbs illustrate that agent-oriented adverbials such as *kirango* 'skillfully' are compatible with these verbs as (235) demonstrates. It should be noted that the acceptability of *kirango* in sentence (235) is due to the presence of *Leka*, the agent argument in the given construction.

- (235) *Leka nyalemanyanya n'ji (kirango)*
Leka ni- a- le- many- a n'ji (kirango)
 Leka INIT- AGRs-PST- cut- FV 3tree (with skill)
 'Leka cut the tree skillfully'

5.3.2.1.4 Purpose clause modification

The causative variants of *cut* verbs examined in this study also demonstrate that these verbs license a purpose clause, and this is due to the presence of an agent argument, as demonstrated in (236).

- (236) *Leka nyalemanyanya n'ji (kusudi nakumbe)*
Leka ni- a- le- many- a n'ji (kusudi nakumbe)
 Leka INIT- AGRs-PST- cut- FV 3tree (so that he sells)
 'Leka cut the tree so that he sells'

5.3.2.1.5 Reason clause modification

Similarly to a purpose clause, a reason clause is also licit with causative forms of *cut* verbs in Kiwoso, as evidenced in (237).

(237) *Leka nyalemanya n'ji (ko sababu wecheendee reema)*

Leka ni- a le- many- a n'ji (ko sababu wecheendee reema)

Leka INIT-AGRs-PST- cut- FV 3tree (because it was bringing dimness)
'Leka cut the tree because it was bringing dimness'

5.3.2.1.6 Temporal phrase modification

The causative variants of *cut* verbs denote atelic Activity events. These verbs are compatible with both durative and time frame adverbials. It should be noted that the telic adverbial modifier *masaa abhi* 'in two hours' in (238a) shifts the aspectual property of the sentence from an Activity to an Accomplishment event. In fact, it has been reported that temporal modifiers override the aspectual value of the verb (see Smith 1997).

(238) a. *Leka nyalemanya n'ji (ko masaa abhi)/(masaa abhi)*

Leka ni- a- le- many- a n'ji (ko masaa abhi)/(masaa abhi)

Leka INIT- AGRs- PST- cut- FV 3tree (for hours two)/(hours two)

Leka cut the tree (for two hours)/(in two hours)

b. *Leka alememanya n'ji (*ko masaa abhi)/(*masaa abhi)*

*Leka a- le- me- many- a n'ji (*ko masaa abhi)/(*masaa abhi)*

Leka AGRs- PST- PERF- cut- FV 3tree (*for hours two)/(*hours two)

Leka had (already) cut the tree (*for two hours)/(*in two hours)

As is the case with *break* verbs discussed in subsection 5.3.1.1.6, grammatical aspect in Kiwoso determines the aspectual interpretation of a sentence with *cut* verbs. A sentence with a perfective morpheme, as in (238b), entails an interpretation of logical termination of the event,

and hence it is incompatible with temporal adverbials. In other words, (238b) instantiates a result state event, while (238a) denotes the event as ongoing, thus compatible with temporal modifications, as the example illustrates.

5.3.2.1.7 Causing event modification

The causative variants of *cut* verbs were also examined in relation to causing event modifiers. The findings demonstrate that causative forms of *cut* verbs in Kiwoso license causing event modification, as example (239) illustrates.

- (239) *Leka nyalemanya n'ji (kweennwo mbanga)*
Leka ni- a- le- many- a n'ji (ko-inuo mbanga)
 Leka INIT- AGRs-PST- cut- FV 3tree (by sharpening swords)
 'Leka cut the tree (by sharpening the swords)'

In causative forms, the causing event modifies agent argument, indicating the sort of actions that an agent had to carry out before engaging in the actual event, as the gloss of the sentence in (239) indicates.

5.3.2.1.8 Manner/Instrument adjunct modification

Manner and instrument adjunct modifiers form one of the best combinations of *cut* verbs in Kiwoso. All examined members of *cut* verbs similarly to *break* verbs examined in subsection 5.3.1.1.7 demonstrate that the causative forms can be modified by manner and instrument adjuncts, as illustrated in (240a).

- (240) a. *Leka nyalemanya n'ji (ferefere)/(na kyaara)*
Leka ni- a- le- many- a n'ji (ferefere)/(na kyaara)
 Leka INIT- AGRs- PST- cut- FV 3tree (quickly)/ (by 7axe)
 'Leka cut the tree (quickly)/ (by means of an axe)'
- b. *Leka alememanya n'ji (*ferefere)*
Leka a- le- me- many- a n'ji (ferefere)
 Leka AGRs- PST- PERF- cut- FV 3tree (quickly)
 'Leka had (already) cut the tree (*quickly)'

Similarly to *break* verbs, in perfective aspect with result state reading, *cut* verbs are also incompatible with manner adjunct, as (240b) evidences. Sentence (238a) denotes process event, hence can be modified by manner adjuncts.

5.3.2.2 The anticausative variants

It has been stated earlier in section 5.3.2 that *cut* verbs similarly to other change of state verbs, participate in the (anti-)causative alternation. The causative variants with various modifications have been presented in 5.3.2.1. This sub-section is devoted to present the properties of *cut* verbs in anticausative constructions.

5.3.2.2.1 Anticausatives with prepositional phrase modification

The *cut* verbs examined in this study demonstrate that the distribution of PPs related to the realization of external argument differ depending on how external arguments are construed. In causative and passive verb classes, the external arguments are perceived as entities, volitional and non-volitional, capable of carrying out the action. (See sections 5.3.2.1.1 and 5.3.2.3.1. Anticausative variants do not license external arguments, but they do license event modifiers. These modifiers illustrate the suitability, possibility, ability, or potentiality of the event occurrence, as (241) illustrates.

- (241) a. *n'ji ulemanyika (*na Leka)/(ko Leka)*
*n'ji u- le- many- ik- a (*na Leka)/(ko leka)*
 3tree 3AGRs-PST- cut- STAT-FV (*by Leka)/ (to Leka)
 'The tree became cut/was cuttable (*by Leka) (to the ability of Leka)'
- b. *n'ji ulemanyika (*na kyaara)/(ko kyaara)*
*n'ji u- le- many- ik- a (*na kyaara)/(ko kyaara)*
 3tree 3AGRs-PST- cut- STAT-FV (*by axe)/ (with axe)
 'The tree became cut/was cuttable (*by axe) (by means of an axe)'

5.3.2.2.2 Agent-oriented adverbial modification

Anticausative variants of *cut* verbs in Kiwoso are infelicitous with the agent-oriented adverbial modifiers, as (242) demonstrates. This is expected because the anticausatives do not license agent arguments.

- (242) *n'ji ulemanyika (*kirango)*
*n'ji u- le- many- ik- a (*kirango)*
 3tree 3AGRs-PST- cut- STAT- FV (*with skill)
 'The tree became cut/was cuttable (*skillfully)'

5.3.2.2.3 Purpose clause modification

The anticausatives of *cut* verbs are also examined in relation to purpose clause modifiers. The constructions illustrate that purpose clauses are disallowed with anticausative sentences, as (243) demonstrates.

- (243) *nj'i ulemanyika (*kusudi ukumbwe)*
*n'ji u- le- many- ik- a (*kusudi ukumbwe)*
 3tree 3AGRs-PST- cut- STAT- FV (*so that it is sold)
 'The tree became cut/was cuttable (*so that it is sold)'

Notice that the purpose clause *kusudi ukumbwe* is unacceptable in (243) due to the fact that anticausatives lack agent arguments that control purpose clauses. Similar observation has been made in sub-section 5.3.1.1.5 with *break* verbs.

5.3.2.2.4 Reason clause modification

Anticausative sentences examined in combination with reason clause give evidence that all *cut* verbs can accept a reason clause, as exemplified in (244).

- (244) *n'ji ulemanyika (ko sababu ya utu)*
n'ji u- le- many- ik- a (ko sababu ya utu)
 3tree 3AGRs-PST- cut- STAT- FV (because of its smallness)
 'The tree became cut/was cuttable (because of its smallness)'

5.3.2.2.5 Temporal phrase modification

Basically, anticausative variants of *cut* verbs denote State events. Similarly to causative variants, the anticausatives can be modified by both durative and time-frame adverbials, which also change the aspectual value of the anticausative sentences. The sentence in (245a) with the durative adverbial *ko masaa abhi* 'for two hours' is interpreted as an Activity event as it

involves an arbitrary endpoint. On the other hand, the time-frame adverbial *masaa abhi* ‘in two hours’ assigns a telic value to that sentence, which thus acquires an Accomplishment interpretation. It has been demonstrated that grammatical aspect affects the aspectual interpretation of events. Sentence (245b) with a perfective aspect denotes the event as having a natural endpoint and, therefore, incompatible with temporal modifications.

- (245) a. *n’ji ulemanika (ko masaa abhi)/ (masaa abhi)*
n’ji u- le- many- ik- a (ko masaa abhi)/(masaa abhi)
 3tree 3AGRs-PST- cut- STAT- FV (for hours two)/ (hours two)
 ‘The tree became cut/was cuttable (for two hours)/ (in two hours)’
- b. *n’ji ulememanyika (*ko masaa abhi)/(*masaa abhi)*
*n’ji u- le- me many- ik- a (*ko masaa abhi)/(*masaa abhi)*
 3tree 3AGRs-PST-PERF- cut- STAT- FV (*for hours two)/(*hours two)
 ‘The tree had (already) become cut (*for two hours)/ (*in two hours).

5.3.2.2.6 Causing event modification

The anticausative sentences with *cut* verbs examined are all compatible with causing event modifiers. Example (246) illustrates that *kweewaanga wandu* modifies the event by providing information about the how of the event occurrence.

- (246) *n’ji ulemanika (kweewaanga wandu)*
n’ji u- le- many- ik- a (ko-iwaanga wa-ndu)
 3tree 3AGRs-PST- cut- STAT- FV (by calling 2-person)
 ‘The tree became cut/was cuttable (through/by inviting people)’

5.3.2.2.7 Manner/Instrument adjunct modification

All anticausative sentences examined in combination with manner and instrument adjuncts illustrate that in a simple sentence, as (247a), the two adjuncts are possible modifiers of the event.

- (247) a. *n'ji ulemanyika (ferefere)/(*na kyaara)/(ko kyaara)*
*n'ji u- le- many- ik- a (ferefere)/(*na kyaara)/(ko kyaara)*
 3tree 3AGRs-PST- cut- STAT-FV (quickly)/ (*by axe)/ (with axe)
 'The tree became cut (quickly)/(*by axe)/(with/by means of an axe)'
- b. *n'ji ulememanyika (*ferefere)*
*n'ji u- le- me many- ik- a (*ferefere)*
 3tree 3AGRs-PST- PERF- cut- STAT-FV (*quickly)
 'The tree had (already) become cut (*quickly)'

Sentence (247b) with perfective morpheme *-me-* presents the event as completed event, thus cannot be modified further by a manner adjunct as the unacceptability of the sentence with such an adjunct illustrates.

5.3.2.3 The passive construction

The passive construction of *cut* verbs exhibit similar characteristics to their corresponding causative variants. However, passives differ from the causatives in terms of external argument realization. Whereas causative variants realize external argument explicitly, the external argument of passive forms is implicitly realized, but can be reintroduced by a *na*-phrase, as the following subsection demonstrates.

5.3.2.3.1 Passives with prepositional phrase modification

All *cut* verbs examined in this study demonstrate that passive constructions involve an implicit argument, which is typically introduced by a *na*-phrase (see also subsection 5.3.1.3.1). Notice that passive constructions of *cut* verbs can also realize an instrument as an implicit argument, as *kyaara* 'axe' in (248) illustrates. Both agent and instrument arguments in passive are introduced by a *na*-phrase but not by a *ko*-phrase as ungrammaticality of the latter phrases in (248) demonstrate.

- (248) *n'ji ulemanyo (na Leka)/(na kyaara)/(*ko Leka)/(*ko kyaara)*
*n'ji u- le- many- o (na Leka)/(na kyaara)/(*ko Leka)/(*ko kyaara)*
 3tree 3AGRs-PST- cut- PASS (by Leka)/(with axe)/(*from Leka)/(*with 7 axe)
 The tree was cut (by Leka)/ (with axe/by means of axe)/ (*to Leka)/ (*with axe)

5.3.2.3.2 Agent-oriented adverbial modification

Passive sentences of all *cut* verbs examined in Kiwoso license agent-oriented adverbial modification. This is an indication that passives involve an implicit agent argument which licenses the agent-oriented modifiers, as evidenced in (249).

- (249) *n'ji ulemanyō (kirango)*
n'ji u- le- many- o (ki-rango)
 3tree 3AGRs-PST- cut- PASS (with clever)
 'The tree was cut (cleverly)'

Notice further that the phrase *kirango* 'skillfully' modified an understood agent in (249), and the sentence is interpreted as 'someone cut the tree skillfully'.

5.3.2.3.3 Purpose clause modification

All members of *cut* verbs in passive sentences are compatible with purpose clause, as (250) illustrates. Again, this points to the presence of agent argument which controls the subject argument in a purpose clause.

- (250) *n'ji ulemanyō (kusudi ukubwe)*
n'ji u- le- many- o (kusudi ukubwe)
 3tree 3AGRs-PST- cut- PASS (so that it is sold)
 'The tree was cut (so that it is sold)'

5.3.2.3.4 Reason clause modification

Like agentive modifiers and purpose clauses, reason clauses can also modify the passive forms of the *cut* verbs examined in this study, as (251) illustrates.

- (251) *n'ji ulemanyō (ko sababu wecheendee reema)*
n'ji u- le- many- o (ko sababu wecheendee reema)
 3tree 3AGRs-PST- cut- PASS (because it was causing dimness)
 'The tree was cut (because it was causing dimness)'

5.3.2.3.5 Temporal clause modification

The passive constructions of the *cut* verbs analyzed in this study demonstrate that, similarly to causative variants, in simple verb clauses, passive constructions can be modified by both time frame and durative adverbials. Events denoted by the simple verb clauses are interpreted as ongoing events, which have no logical endpoint. On the other hand, when *cut* verbs co-occur in the perfect grammatical aspect, the sentence receives a result state interpretation, thus it is incompatible with temporal adverbial modification, as demonstrated in (252b). It has been pointed out earlier that clauses with *cut* verbs are Activity events which are typically atelic. However, when these verbs appear with telic adverbials such as *masaa abhi* ‘in two hours’ these verbs receive an Accomplishment interpretation, as (252a) exemplifies.

- (252) a. *n’ji ulemanyo (ko masaa adadu)/ (masaa adadu)*
n’ji u- le- many- o (ko masaa adadu)/(masaa adadu)
 3tree 3AGRs-PST- cut- PASS (for hours three)/ (hours three)
 ‘The tree was cut (for three hours)/ (in three hours)’
- b. *n’ji ulememanyo (*ko masaa adadu)/ (*masaa adadu)*
*n’ji u- le- me- many- o (*ko masaa adadu)/(*masaa adadu)*
 3tree 3AGRs-PST- PERF- cut- PASS (*for hours three)/ (*hours three)
 ‘The tree had (already) been cut (*for three hours)/ (*in three hours)’

5.3.2.3.6 Causing event modification

Causing event modification used in combination with passive constructions of *cut* verbs demonstrate that passives similarly to causatives license the causing event which modifies the implicit agent, as (253) demonstrates.

- (253) *n’ji ulemanyo (kweenwo kyaara)*
n’ji u- le- many- o (kweenwo kyaara)
 3tree 3AGRs-PST- cut- PASS (by sharpening axe)
 ‘The tree was cut (by sharpening the axe)’

The interpretation of sentence (253) is that prior the event of cutting took place, an agent (which is implicit in this case) had to carry out an event of sharpening the axe, otherwise he/she might not have been able to perform the event.

5.3.2.3.7 Manner/Instrument adjunct modification

All constructions examined illustrate that passive forms of *cut* verbs are compatible with manner, as well as instrument adjuncts. Similarly to causative variants, both manner and instrument adjuncts modify an (implicit) agent, as (254a) exemplifies.

- (254) a. *n'ji ulemanyo (uwin)/ (na kyaara)*
n'ji u- le- many- o (uwin)/(na kyaara)
 3tree 3AGRs-PST- cut- PASS (quickly)/ (by axe)
 'The tree was cut (quickly)/ (by means of an axe)'
- b. *n'ji ulememanyo (*uwin)*
*n'ji u- le- me- many- o (*uwin)*
 3tree 3AGRs-PST- PERF- cut- PASS (*quickly)
 'The tree had (already) been cut (*quickly)'

The manner and instrument adjuncts in passives, as evidenced in (254a), provide additional information about how the agent carries out the action. By contrast, when these adjuncts appear with anticausatives, they modify the event (cf. example 247, in subsection 5.3.2.2.7). Sentence (254b) denotes the event as completed and, therefore, cannot co-occur with a manner adjunct, whereas in (254a), the sentence has an ongoing event interpretation, hence it is felicitous with manner adjunct modification.

5.3.2.4 Middle constructions

It has been pointed out in section 5.3.1.4 that middle constructions in Kiwoso, as in most other languages, express generic statements that lack specific time reference. The *break* verbs examined in relation to middle sentences illustrate that, although a modal element is not explicitly expressed in middles, the notion is semantically implied, as section 5.3.1.4 demonstrates. Similarly to *break* verbs, the *cut* verbs analyzed with respect to middle construction properties demonstrate that these verbs are also good candidates for middle formation. Example (255) is given to illustrate this property.

- (255) a. *ubanu lumanyikaa (uwin)*
ubanu lu- many- ik- a- a (uwin)
 11Eucalyptus 11AGRs-cut- STAT-FV- HAB (quickly)
 ‘Eucalyptus (tree) cuts quickly’
- b. *n’ji ntu umanyikaa (uwin)*
n’ji ntu u- many- ik- a- a (uwin)
 3tree small 3AGRs-cut- STAT-FV- HAB (quickly)
 ‘Small tree cuts quickly’

Note that the grammatical subject *ubanu* in (255a), and *n’ji ntu* in (255b), are construed as comprising properties interpreted that the event denoted by the verb is possible, and can be carried out quickly by anyone without difficulty.

The example sentences demonstrate that middle sentences are incompatible with agent arguments and, therefore, agentive phrases are unacceptable, as (256) illustrates. Similar results were obtained with *break* verbs examined in section 5.3.1.4, as evidenced in examples (231) and (232).

- (256) *ubanu lumanyikaa (nicha) (*na womi) (*ko makusudi)*
*ubanu lu- many- ik- a- a (nicha) (*na womi) (*ko makusudi)*
 11Eucalyptus 11AGRs-cut- STAT-FV- HAB (well) (by men)/ (*for purpose)
 ‘Eucalyptus (tree) cuts well (*by men)/ (*purposely)’.

It has been noted that the interpretation of middle constructions in Kiwoso concerns the attributes of the grammatical subject, and this is the reason that middles under no circumstances license an agent as an external argument.

Table 23 summarizes the properties of sentences with *cut* verbs in relation to argument realization in combination with various modifications.

ECCSV in Kiwoso	CAUSATIVE											PASSIVE											ANTICAUSATIVE											MIDDLES					
	DIAGNOSTICS											DIAGNOSTICS											DIAGNOSTICS											DIAGNOSTICS					
	Agent	Instrument	Causers	Agent-adv	Purpose clause	Reason clause	Tem. adj		Causing event	Instrument-adj	Manner-adj	Agent	Instrument	Causers	Agent-adv	Na- phrase	Purpose clause	Reason clause	Tem.a dj		Causing event	Instrument-adj	Manner-adj	Agent	Instrument	Causers	Agent-adv	Ko- phrase	Purpose clause	Reason clause	Tem. adj		Causing event	Instrument-adj	Manner-adj	Agent-adv	Purpose clause	PPs	
						For-adj	In-adj												For-adj	In-adj										For-adj	In-adj							Ko-PP	Na-PP
manyá	✓	✓	#	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	*	✓	*	✓	✓	✓	✓	✓	*	*	✓	*	
bará	✓	✓	#	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	*	✓	*	✓	✓	✓	✓	✓	*	*	✓	*	
rachá	✓	✓	#	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	*	✓	*	✓	✓	✓	✓	✓	*	*	✓	*	
randa	✓	✓	#	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	*	✓	*	✓	✓	✓	✓	✓	*	*	✓	*	
dummbó	✓	✓	#	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	*	✓	*	✓	✓	✓	✓	✓	*	*	✓	*	

Table 23: Summary of diagnostics with *cut* verbs in Kiwoso

5.3.3 Cook Verbs

Cook verbs describing the methods of cooking in particular, are characterized as change of state verbs (Levin 1993). The author argues that these verbs behave like verbs of creation and transformation. Indeed, like most externally caused change of state verbs in Kiwoso, *cook* verbs participate in causative alternations. The *cook* verbs examined in this study include *kora* ‘cook’, *sambuta* ‘warm’, *warata* ‘heat’, and *chemsha* ‘boil’. Since these verbs are semantically similar, the discussion focuses on the verb *kora* ‘cook’. However, atypical cases are also pointed out accordingly.

5.3.3.1 The causative variants of *cook* verbs

All constructions of *cook* verbs examined display causative properties. The causation property of *cook* verbs were determined by using different diagnostics, as presented in the following sub-sections.

5.3.3.1.1 Agent/Instrument as external arguments

The causative variants of *cook* verbs examined in this study demonstrate that these verbs denote human oriented events and, therefore, license an agent argument as well as instrument, as demonstrated in (257).

- (257) *wana/nungu (wa)/(i)lekora kelya*
wa-na/nungu (wa)/(i)- le- kor- a kelya
 2-child/9pot (2)/(9)AGRs- PST- cook- FV 7food
 ‘Children/the pot cooked some food’

In sentence (257), *nungu* ‘pot’ is understood as a tool or an instrument employed by an agent to perform the event of cooking. The implication is that all cooking events are under the control of a volitional agent, and the event of *cooking* similarly to that of *cutting* discussed in subsection 5.3.2.1.1, subsumes instrument arguments.

5.3.3.1.2 Natural force as external argument

The examined *cook* verbs in Kiwoso are similar to *cut* verbs and the verb *saka* ‘grind’ in that these verbs are conceptualized as denoting eventualities that are necessarily brought about by

volitional arguments. Therefore, these verbs are incompatible with non-volitional arguments such as natural forces, as the semantic anomaly of sentence (258) illustrates.

(258) *#upepo lulekora kelya*

<i>upepo</i>	<i>lilu</i>	<i>le-</i>	<i>kor-</i>	<i>a</i>	<i>kelya</i>
11wind	11AGRs-	PST-	cook	-FV	7food

‘The wind cooked food’

5.3.3.1.3 Agent-oriented adverbial modification

Causative constructions of *cook* verbs in Kiwoso are compatible with agent-oriented adverbials, as exemplified in (259).

(259) *wana walekora kelya (kirango)*

<i>wa-na</i>	<i>wa-</i>	<i>le-</i>	<i>kor-</i>	<i>a</i>	<i>kelya</i>	<i>(kirango)</i>
2-child	2AGRs-PST-	cook-	FV	7food	(with skills)	

‘The children cooked food (skillfully)’

The adverbial *kirango* ‘skillfully’ in (259) modifies external agent *wana* ‘children’ and provides more details on how children carried out the event.

5.3.3.1.4 Purpose clause modification

Purpose clause is usually under the control of a volitional agent. *Cook* verbs denote human-oriented activities, and hence they easily co-occur with purpose clauses in all the sentences with *cook* verbs examined in Kiwoso, as exemplified in (260).

(260) *wana walekora kelya (kusudi wandu walye)*

<i>wa-na</i>	<i>wa-</i>	<i>le-</i>	<i>kor-a</i>	<i>kelya</i>	<i>(kusudi wandu walye)</i>
2-child	2AGRs-PST-	cook-FV	7food	(so that 2-person 2-eat)	

‘The children cooked food (so that people (can) eat)’

The purpose clause *kusudi wandu walye* points to the intention of the external argument in carrying out the action, therefore, the clause is more oriented to the agent argument (see also subsections 5.3.1.1.5 and 5.3.2.1.5).

5.3.3.1.5 Reason clause modification

The causative constructions analyzed demonstrate that all *cook* verbs can be modified by a reason clause, as (261) illustrates.

- (261) *wana walekora kelya (kosababu bheesye chaa)*
wa-na wa- le- kor- a kelya (kosababu bheesye chaa)
 2-child 2AGRs-PST- cook- FV 7food (because they were hungry)
 ‘Children cooked food (because they were hungry)’

5.3.3.1.6 Temporal phrase modification

Sections 5.3.1.1 and 5.3.2.1 demonstrate that causative variants of *break* and *cut* verbs can co-occur with both time-frame and the durative adverbials. Similarly, causative variants of *cook* verbs examined in this study demonstrate similar results, as evidenced in (262).

- (262) a. *wana walekora kelya (ko masaa adadu)/(masaa adadu)*
wa-na wa- le- kor- a kelya (ko masaa adadu)/(masaa adadu)
 2-child 2AGRs-PST- cook- FV 7food (for hours three)/(hours three)
 ‘Children cooked food (for three hours)/ (in three hours)’
- b. *wana walemekora kelya (*ko masaa adadu)/(*masaa adadu)*
*wa-na wa- le- me kor-a kelya (*ko masaa adadu)/(*masaa adadu)*
 2-child 2AGRs-PST- PERF-cook-FV 7food (*for hours three)/ (*hours three)
 ‘Children had (already) cooked food (*for three hours)/ (*in three hours)’

Example (262a) with a durative adverbial *ko masaa adadu* ‘for three hours’ modification denotes an atelic Activity event, whereas the same sentence with a time-frame adverbial *masaa adadu* ‘in three hours’ is understood as an Accomplishment event. Time-frame adverbial shifts aspectual properties of the simple verb constellation from an atelic into a telic meaning (see also the discussion in subsections 5.3.1.1.6 and 5.3.2.2.5). However, when the same verb appears with grammatical aspect such as the perfective, as in (262b) both durative and frame adverbials are unacceptable. This is because the grammatical aspect gives the logical endpoint interpretation to a sentence. Therefore, sentence (262a) is interpreted as a bounded process

event, whereas (262b) has a result state interpretation, hence it is incompatible with temporal adverbials.

5.3.3.1.7 Causing event modification

Causative variants of cook verbs, similarly to that of *break* and *cut* verbs discussed in the previous sections, are compatible with causing event modifier, as (263) demonstrates.

(263) *wana walekora kelya (kweewaanga wanndasa)*

wa-na wa- le- kor- a kelya (ko iwaanga wa-nndasa)

2-child 2AGRs-PST- cook- FV 7food (by calling 2-neighbours)

‘Children cooked food (by inviting/involving neighbours)’

As is the case with other externally caused change of state verbs discussed previously, the causing event in causative variants of *cook* verbs modifies the agent participant of the event, rather than the event described in the sentence.

5.3.3.1.8 Manner/Instrument adjunct modification

Causative sentences of *cook* verbs analyzed are all acceptable with manner and instrument adjunct modifications. The modifiers provide additional information on how the agent performs the event, as example (264) demonstrates.

(264) a. *wana walekora kelya (nicha)/(na nungu)*

wa-na wa- le- kor- a kelya (niche)/(na nungu)

2-child 2AGRs-PST- cook- FV (7food well)/(with pot)

‘Children cooked food (well)/(by means of a pot)’

b. *wana walemekora kelya (*nicha)*

*wa-na wa- le- me kor- a kelya (*nicha)*

2-child 2AGRs-PST- PERF- cook- FV 7food (*well)

‘Children had (already) cooked food (*well)’

Similarly to *break* and *cut* verbs discussed in sections 5.3.1 and 5.3.2 respectively, *cook* verbs with the perfective aspect cannot co-occur with a manner adjunct, as (264b) illustrates. This is because the perfective aspect in Kiwoso denotes a natural endpoint of the event, whereas a

simple verb, as in (264a), expresses a process event, which lacks a logical culmination, and is thus compatible with a manner adjunct.

5.3.3.2 The Anticausative constructions of *cook* verbs

It has been pointed out in section 5.3.3 that *cook* verbs, similarly to other change of state verbs, exhibit causative properties. Similarly to *break* and *cut* verbs, *cook* verbs can undergo causative alternations. This section is devoted to examine the anticausative variants of *cook* verbs in combination with various diagnostics in order to establish properties of arguments that are realized in these alternates, as well as aspectual properties associated with the anticausatives of these verbs in Kiwoso.

Generally, unlike causative variants, the anticausative constructions of *cook* verbs examined do not license an agent argument. However, the examined constructions demonstrate that an instrument argument may appear as subject in the anticausatives, although the interpretation of this instrument is quite different from the interpretation of the instrument argument in causative variants, as (265) illustrates.

- (265) *nungu ilekorika kelya*
nungu *i-* *le-* *kor-* *ik-* *a* *kelya*
 9pot 9AGRs-PST- cook-STAT- FV 7food
 ‘The pot got/became cooked food’

The instrument *nungu* ‘pot’ in (265) cannot be interpreted as a direct participant in the event, but rather as the potential or possible tool used in carrying out the event. On the other hand, the instrument subjects in the causative variants (cf. sections 5.3.1.1.2 and 5.3.2.1.1), directly refer to the tools employed by the understood agent argument in carrying out the events described in the sentence. In (265), the instrument subject is conceptualized as involved in an event and, therefore, it is inherently eventive.

5.3.3.2.1 Anticausative with prepositional phrase modification

It has been established in sections 5.3.1 and 5.3.2 that passive variants involve implicit arguments, but anticausatives involve event modifiers. These differences are reflected in the PPs that introduce implicit arguments in passives, and modifiers in anticausatives. Sentences with *break* and *cut* verbs examined in relation to the distribution of PPs demonstrate that

implicit arguments in passives are realized by a *na*-phrase, whereas the anticausatives modifiers are introduced by a *ko*-phrase. This is also the case with *cook* verbs, as example (266) demonstrates.

- (266) *kelya kilekorika (*na wana)/(ko wana)*
*kelya ki- le- kor- ik- a (*na wana)/ (ko wana)*
 7food 7AGRs-PST- cook- STAT-FV (by 2-child) (to 2-child)
 ‘The food was cookable (*by children)/ (to the ability/potentiality of the children)’

Example (266) evidences that whereas the *na*-phrase is unacceptable, the *ko*-phrase is acceptable. In (266), the *ko*-phrase denotes the ability or potentiality of the children in the occurrence of the event.

5.3.3.2.2 Agent-oriented adverbial modification

The examined constructions with *cook* verbs in Kiwoso demonstrate that agentive modifiers are incompatible with anticausatives, as exemplified in (267).

- (267) *kelya kilekorika (*ko makusudi)*
*kelya ki- le- kor- ik- a (*ko makusudi)*
 7food 7AGRs-PST- cook- STAT-FV (with purpose)
 ‘The food was cookable (*purposely)’

Characteristically, anticausatives do not license an agent argument in Kiwoso and this, in turn, rules out the permissibility of an agentive adverbial in (267). A similar observation has also been made in sub-sections 5.3.1.2.3 and 5.3.2.2.2 with *break* and *cut* verbs, respectively.

5.3.3.2.3 Purpose clause modification

It has been demonstrated in the previous section that similarly to agent-oriented modifiers, purpose clause requires the presence of an agent argument. The anticausative variants of all *cook* verbs are incompatible with the occurrence of a purpose clause. This is because anticausatives lack an agentive property, hence no control can obtain into a purpose clause, as (268) exemplifies.

- (268) *kelya kilekorika (*kusudi wandu walye)*
*kelya ki- le- kor- ik- a (*kusudi wa-ndu wa-lye)*
 7food 7AGRs-PST- cook- STAT-FV (so that 2-person 2-eat)
 ‘The food was cookable (*so that people eat)’

5.3.3.2.4 Reason clause modification

All anticausatives of *cook* verb examined in Kiwoso display compatibility with reason clause, as evidenced in (269).

- (269) *kelya kilekorika(kosababu ya shuungo)*
kelya ki- le- kor- ik- a (ko sababu ya shiungo)
 7food 7AGRs-PST- cook- STAT-FV (because of spices)
 ‘The food was cookable (because of spices)’

5.3.3.2.5 Temporal phrase modification

It has been pointed out in section 5.3.3.1 that *cook* verbs are basically Activity verbs. The anticausative variants of these verbs are construed as Stative in terms of aspectual classes. However, with the durative adverbial *ko masaa adadu* ‘for three hours’, the sentence in (270) acquires atelic Activity event interpretation. By contrast, the time-frame adverbial *masaa adadu* ‘in three hours’ shifts the aspectual property of the sentence into the Accomplishment event.

- (270) a. *kelya kilekorika (ko masaa adadu)/(masaa adadu)*
kelya ki- le- kor- ik- a (ko masaa adadu)/(masaa adadu)
 7food 7AGRs-PST- cook- STAT-FV (for hours three)/(hours three)
 ‘The food was cookable (for three hours)/(in three hours)’
- b. *kelya kilemekorika (*ko masaa adadu)/(*masaa adadu)*
*kelya ki- le- me kor- ik- a (*ko masaa adadu)/(*masaa adadu)*
 7food 7AGRs-PST- PERF-cook- STAT-FV (*for hours three)/(*hours three)
 The food had (already) become cooked (*for three hours)/(*in three hours)

The anticausative variant of *cook* verbs with grammatical aspect, as in (270b) denotes an event with natural endpoint and has result state interpretation, and thus does not allow temporal modifiers. This is unlike sentence (270a) which has ongoing event interpretation, and hence compatible with temporal adverbials.

5.3.3.2.6 Causing event modification

Example (271) asserts that the anticausative variants of *cook* verbs allow causing event modifiers. Similarly to other verbs examined in subsections 5.3.1.3.6 and 5.3.2.2.4, the causing event modifies the event as a whole, as (271) evidences.

(271) *kelya kilekorika (kweeurya mudo)*

kelya ki- le- kor- ik- a (ko-iurya mudo)
 7food 7AGRs-PST- cook- STAT-FV (by-igniting 9fire)
 ‘The food was cookable (through/by igniting the fire)’

5.3.3.2.7 Manner/Instrument adjunct modification

Anticausative variants of cook verbs are all felicitous with manner and instrument adjuncts. As has been demonstrated for anticausative sentences with *break* and *cut* verbs, manner adjuncts modify the event denoted by the verb as example (272) with the verb ‘cook’ illustrates.

(272) a. *kelya kilekorika (uwin)/ (ko nungu)*

kelya ki- le- kor- ik- a (uwin)/ (ko nungu)
 7food 7AGRs-PST- cook- STAT-FV (quickly)/ (with pot)
 ‘The food became cooked/ (quickly)/ (by means of a pot)’

b. *kelya kilemekorika (*uwin)*

*kelya ki- le- me- kor- ik- a (*uwin)*
 7food 7AGRs-PST- PERF-cook- STAT-FV (*quickly)
 ‘The food had (already) became cooked/ (*quickly)’

The anticausative variant of *cook* verbs with the perfect grammatical aspect in (272b) denotes an event with a logical culmination, and it has a result state interpretation which does not allow manner adjunct modification. This is unlike sentence (272a) which has an ongoing event interpretation, and thus is compatible with a manner adjunct.

5.3.3.3 The passive constructions

The characteristics of *cook* verbs are also examined in relation to passive constructions. All verbs analyzed demonstrate that, similarly to *break* and *cut* verbs, *cook* verbs can passivize. In all respective, passive forms of *cook* verbs behave similarly to passive constructions of *break* and *cut* verbs in relation to the employed diagnostics, as demonstrated in the following subsections.

5.3.3.3.1 Passives with prepositional phrase modification

Similarly to previously examined verbs in this study, passive forms of *cook* verbs involve an implicit argument which is realized by a *na*-phrase, as (273) exemplifies.

- (273) *kelya kilekoro (na wana)/ (*ko wana)*
*kelya ki- le- kor- o (na wa-na)/ (*ko wa-na)*
 7food 7AGRs-PST- cook- PASS (by 2-child)/ (to 2-child)
 ‘The food was cooked (by the children)/ (*to the children)’

Notice that a *na*-phrase is acceptable in (273) but not a *ko*-phrase. This implies that passive expresses agentive implicit arguments which is usually incompatible with a *ko*-phrase in Kiwoso.

5.3.3.3.2 Agent-oriented adverbial modification

Passive forms of *cook* verbs behave similarly to the causative variants in terms of agentive modification. The verbs examined demonstrate that passivized forms can be modified by agent-oriented adverbials, and an adverbial *kirango* in (274) modifies the implicit agent argument.

- (274) *kelya kilekoro (kirango)*
kelya ki- le- kor- o (kirango)
 7food 7AGRs-PST- cook- PASS (with clever)
 ‘The food was cooked (cleverly)’

5.3.3.3.3 Purpose clause modification

As for the agentive phrase, a purpose clause requires the control of an agent. The passive constructions of *cook* verbs involve an implicit agent argument which controls into a purpose clause and, therefore, compatible with passives, as example (275) illustrates.

- (275) *kelya kilekoro (kusudi wana walye)*
kelya ki- le- kor- o (kusudi wa-na walye)
 7food 7AGRs-PST- cook- PASS (so that 2-child 2-eat)
 ‘The food was cooked so that children (can) eat’

5.3.3.3.4 Reason clause modification

The results of the passive sentences examined demonstrate that passive constructions can be modified by a reason phrase, as evidenced in (276). *Break* and *cut* verbs, discussed in 5.3.1.3 and 5.3.2.3, respectively display a similar property.

- (276) *kelya kilekoro (kosababu ya bheenu)*
kelya ki- le- kor- o (kosababu ya bheenu)
 7food 7AGRs-PST- cook- PASS (because of visitors)
 ‘The food was cooked (because of the visitors)’

5.3.3.3.5 Temporal phrase modification

It has been established in sub-section 5.3.3.1.6 that adverbial modifiers result in a shift of the aspectual value of *cook* verbs. Similarly, when time-frame adverbials appear in the passive constructions, as in (277a), the sentence acquires an Accomplishment event interpretation. With durative adverbial modification, *ko masaa abhi* ‘for two hours’, sentence (277a) is interpreted as atelic Activity event with an arbitrary endpoint, whereas with the time-frame adverbial *masaa abhi* ‘in two hours’, the sentence signifies a telic Accomplishment reading.

- (277) a. *kelya kilekoro (ko masaa abhi)/ (masaa abhi)*
kelya ki- le- kor- o (ko masaa abhi)/ (masaa abhi)
 7food 7AGRs-PST- cook- PASS (for hours two)/ (hours two)
 ‘The food was cooked (for two hours)/ (in two hours)’

- b. *kelya kilemekoro (*ko masaa abhi)/(*masaa abhi)*
*kelya ki- le- me- kor- o (*ko masaa abhi)/(*masaa abhi)*
 7food 7AGRs-PST- PERF- cook- PASS (*for hours two)/(*hours two)
 ‘The food had (already) been cooked (*for two hours)/(*in two hours)’

As for the passive forms of *break* and *cut* verbs presented in sections 5.3.1.3.4 and 5.3.2.3.5, respectively, the passive constructions of *cook* verbs examined with the perfective grammatical aspect in Kiwoso cannot co-occur with temporal adverbials. This is because these adverbials set bound to the events, and since the perfective morpheme assigns a logical culmination to the event, temporal adverbials are not acceptable with a sentence containing the perfective grammatical aspect, as (277b) illustrates.

5.3.3.3.6 Causing event modification

The results of this study demonstrate that passivized *cook* verbs can co-occur with the causing event modifier, as in (278). As for the causative variants of these verbs, the causing event in passives modifies the agent which is understood (i.e. implicit) in passives.

- (278) *kelya kilekoro (kweechangisha wandu)*
kelya ki- le- kor- o (ko ichangisha wandu)
 7food 7AGRs-PST- cook- PASS (by making people contribute)
 ‘The food was cooked (by making people to contribution)’

5.3.3.3.7 Manner/Instrument adjunct modifications

Modifiers such as manner and instrument adjuncts are all compatible with the passive forms of the *cook* verbs examined. It has been pointed out in sub-sections 5.3.1.1.7 and 5.3.2.1.8 that in causative variants, these adjuncts make reference to the agents. Passives involve an implicit agent argument and, therefore, these modifiers are oriented towards such an argument, as exemplified in (279a).

- (279) a. *kelya kilekoro (nicha)/(na nungu)*
kelya ki- le- kor- o (nicha)/(na nungu)
 7food 7AGRs-PST- cook- PASS (well)/(by pot)
 ‘The food was cooked (well)/ (by means of a pot)’

- b. *kelya kilemekoro (*nicha)*
*kelya ki- le- me- kor- o (*nicha)*
 7food 7AGRs-PST- PERF-cook- PASS (*well)
 ‘The food had (already) been cooked (*well)’

Similarly to *break* and *cut* verbs, when *cook* verbs co-occur with the perfective grammatical aspect manner adjunct modification is unacceptable, as (279b) demonstrates.

5.3.3.4 Middle sentences

It has been evidenced in sections 5.3.1.4 and 5.3.2.4 that externally caused change of state verbs exhibit middle characteristics. Middle constructions of *break* and *cut* verbs previously discussed illustrate that the use of those verbs in middle formations point to the properties of the grammatical subject.

Cook verbs examined in relation to middle formation demonstrate similar properties, namely that the event denoted by the verb in middle constructions is interpreted as an easy event, capable of being done by anyone. Example (280) clarifies the properties of middle forms with *cook* verbs in Kiwoso.

- (280) a. *nyanyi tikorikaa nicha (*na wana)/(*kirango)*
*nyanyi ti- kor- ik- a- a nicha (*na wa-na)/*
*(*kirango)*
 10vegetable 10AGRs-cook-STAT-FV- HAB well (*by 2-child)/
 (*with clever)
 ‘Vegetable cooks well (*by children)/(*cleverly)’
- b. *nyanyi tikorikaa nicha (*kusudi tilyo)/(*ko sababu yebhika muda)*
*nyanyi ti- kor- ik- a- a nicha (*kusudi*
*tilyo)/(*ko sababu yebhika muda)*
 10vegetables 10AGRs-cook-STAT-FV- HAB well (so that they are
 eaten)/(because of adding water)
 ‘Vegetable cooks well (*so that they are eaten)/(*because of adding water)’

Examples (280a-b) demonstrate that as the general property of middle constructions, agentive phrases or clauses are unacceptable. The sentences demonstrate that it is the characteristic property of the grammatical subject *nyanyi* ‘vegetable’ which makes the event expressed in the sentence a possible event. The characteristics of *cook* verbs regarding argument realization and causation are summarized in table 24.

ECCSV in Kiwoso	CAUSATIVE											PASSIVE											ANTICAUSATIVE											MIDDLES					
	DIAGNOSTICS											DIAGNOSTICS											DIAGNOSTICS											DIAGNOSTICS					
	Agent	Instrument	Causers	Agent-adv	Purpose clause	Reason clause	Tem .adj		Causing event	Instrument-adj	Manner-adj	Agent	Instrument	Causers	Agent-adv	Na- phrase	Purpose clause	Reason clause	Tem .adj		Causing event	Instrument-adj	Manner-adj	Agent	Instrument	Causers	Agent-adv	Ko- phrase	Purpose clause	Reason clause	Tem. adj		Causing event	Instrument-adj	Manner-adj	Agent-adv	Purpose clause	PPs	
							For-	In-adj											For-	In-adj											Ko	Na							
<i>kora</i>	✓	✓	#	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	✓	✓	✓	✓	✓	✓	✓	✓	*	*	✓	*	*	✓	*	✓	✓	✓	*	*	✓	*	✓	*	
<i>sambuta</i>	✓	✓	#	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	*	✓	*	✓	✓	✓	✓	*	*	✓	*	✓	*	
<i>warata</i>	✓	✓	#	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	*	✓	*	✓	✓	✓	✓	*	*	✓	*	✓	*	
<i>chemsha</i>	✓	✓	#	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	*	✓	*	✓	✓	✓	✓	✓	*	*	✓	*	✓	*

Table 24: Summary of the properties of *cook* verbs with various diagnostics in Kiwoso

5.3.4 *Bend* verbs

In the discussion of *break* verb in section 5.3.1 it has been pointed out that these verbs involve change of state in the material integrity of an entity. *Bend* verbs are similar to *break* verbs in that the two categories involve a change in the material integrity. However, different from *break* verbs, *bend* verbs involve the change of the shape of the material integrity, and constitute reversible actions (cf. Levin 1993). Put differently, the change of state resulting from *bend* verbs can be reversed, but the change of state induced by *break* verbs cannot be reversed. For example, one can ‘unbend’ something but it is not possible to ‘unbreak’ something. This section is devoted to discuss *bend* verbs in relation to external argument realization, as well as their aspectual properties, as is the case for *break*, *cut*, and *cook* verbs discussed in sections 5.3.1, 5.3.2, and 5.3.3, respectively. Three *bend* verbs, namely *lema* ‘bend’, *pinda* ‘wrinkle’ and *lema* ‘fold’ have been examined but the discussion centers in the verb *lema* ‘fold’.

5.3.4.1 Causative variants of *bend* verbs

It has been established that externally caused change of state verbs are typically causative verbs (see Levin & Rappaport Hovav 1995; Alexiadou et al. 2006; Schäfer 2008). Similarly to other change of state verbs discussed in the previous sections, causative sentences with *bend* verbs exhibit various characteristics with regard to external argument realization, as demonstrated in the following subsections.

5.3.4.1.1 Agent as subject/causer

The sentences examined regarding *bend* verbs in Kiwoso illustrate that all members in this category can license agent as external argument, as the verb *lema* ‘fold’ in (281) illustrates.

- (281) *waka walelema masulya*
 wa-ka *wa-* *le-* *lem-a* *masulya*
 2-woman 2AGRs-PST- fold-FV 6blankets
 ‘Women folded the blankets’

5.3.4.1.2 Instrument as external argument

Bend verbs analyzed in causative sentences for this study demonstrate that their external argument can be an agent as well as an instrument, as examples in (281) and (282) respectively, demonstrate. Instrument as external causer in this context is conceived as a means employed

by an agent. In other words, the presence of an instrument as an external causer in (282), and in the causative constructions in general implies the presence of a volitional agent as the manipulator of the instrument in the sentence.

- (282) *pasi ilelema masulya*
pasi i- le- lem- a masulya
 9iron 9AGRs-PST- fold- FV 6blankets
 ‘An iron folded the blankets’

5.3.4.1.3 Natural force as external causer

The discussion in sections 5.3.2 and 5.3.3 demonstrate that *cut* and *cook* verbs in Kiwoso denote human-driven activities. Members of these category do not allow a natural force as an external causer of events. Unlike these categories, members of *bend* verbs can license natural forces as external arguments but this is subject to object selectional restrictions. Notice that whereas a natural force *upepo* ‘wind’ in (283a) is acceptable, sentence (283b) with the verb *lema* ‘bend’ is odd because of the choice of an object argument. In other words, wind is construed as incapable of inducing a change to something hard as an iron bar.

- (283) a. *upepo lulelema (masulya)/(ibati)*
upepo lu- le- lem- a (ma-sulya)/(ibati)
 11wind 11AGRs-PST- fold- FV (6-blanket)/ (5iron-sheet)
 The wind folded (the blankets)/ (an iron-sheet)
- b. *#upepo lulelema chuma*
upepo lu- le- lem- a chuma
 11wind 11AGRs-PST- bend- FV 9iron bar
 ‘The wind bent the iron bar’

5.3.4.1.4 Agent-oriented adverbial modification

Change of state verbs examined in this study illustrate that causative variants of all members allow agentive modifiers. Similarly, the causative variant of *bend* verbs can be modified by an agentive adverbial, as evidenced in (284).

- (284) *waka walelema masulya (kirango)*
wa-ka wa- le- lem- a masulya (kirango)
 2-woman 2AGRs-PST- fold- FV 6blankets (with clever)
 ‘Women folded blankets (cleverly)’

Notice that acceptability of the agentive modifiers point to the presence of agent argument, as also pointed out in subsections 5.3.1.1.4, 5.3.2.2.3, and 5.3.3.1.3.

5.3.4.1.5 Purpose clause modification

The causative variants discussed so far demonstrate that all externally caused change of state verbs license an agent argument which exhibits control of an argument in the purpose clauses. *Bend* verbs are typical change of state verbs in Kiwoso, and thus allow purpose clause modifiers, as (285) demonstrates.

- (285) *waka walelema masulya (kusudi wabhike sandukun)*
waka wa- le- lem- a masulya (kusudi wabhike sandukun)
 2-woman 2AGRs-PST- fold- FV 6blankets (so that they keep in locker)
 ‘Women folded the blankets (so that they keep into the locker)’

5.3.4.1.6 Reason clause modification

The results obtained in this study illustrate that agentive modifiers, purpose and reason clause modifications are compatible in all verb categories presented in sections 5.3.1-5.3.3. *Bend* type verb constructions examined in this study exhibit similar results, as evidenced in (286).

- (286) *waka walelema masulya (ko sababu bheende wabhike sandukun)*
waka wa- le- lem- a masulya (ko sababu bheende wabhike sandukun)
 2-woman 2AGRs-PST- fold- FV 6blankets (because they wanted to keep in locker)
 ‘Women folded blankets (because they wanted to keep into the locker)’

5.3.4.1.7 Temporal clause modification

Causative variants examined in relation to temporal aspectual properties demonstrate that *bend* verbs are basically Activity verbs, hence they are compatible with durative and time frame temporal adverbials, as example (287a) illustrates. However, the two adverbials derive different event interpretations from the same verb. *Bend* verbs with durative adverbial such as *ko masaa abhi* ‘for two hours’ are interpreted as an atelic Activity event with arbitrary endpoint, while the same verb with a time frame adverbial such as *masaa abhi* ‘in two hours’ achieves a telic Accomplishment event with a natural endpoint.

- (287) a. *waka walelema masulya (ko masaa abhi)/(masaa abhi)*
wa-ka wa- le- lem-a masulya (ko masaa abhi)/(masaa abhi)
 2-woman 2AGRs-PST- fold-FV 6blankets (for hours two)/(hours two)
 ‘Women folded blankets (for two hours)/ (in two hours)’
- b. *waka walemelema masulya (*ko masaa abhi)/(*masaa abhi)*
*wa-ka wa- le- me- lem-a masulya (*ko masaa abhi)/(*masaa abhi)*
 2-woman 2AGRs-PST- PERF- fold-FV 6blankets (*for hours two)/(*hours two)
 ‘Women had (already) folded the blankets (*for two hours)/(*in two hours)’

Similarly to causative alternates of *break*, *cut* and *cook* verbs examined in relation to grammatical aspect and temporal modifiers in sections 5.3.1.1.6, 5.3.2.1.6, 5.3.3.1.6, respectively, sentences with *bend* verbs in combination with perfective morpheme cannot co-occur with temporal adverbials. This is exemplified in (287b). Similarly to other verb constructions, a sentence in (287b) illustrates a result state event.

5.3.4.1.8 Causing event modification

All members of *bend* verbs examined in causative alternation demonstrate that the causative constructions of *bend* verbs are compatible with causing event modifiers, as (288) demonstrates.

- (288) *waka walelema masulya (kweewaala kitaren)*
wa-ka wa- le- lem- a (masulya koiwaala kitaren)
 2-woman 2AGRs-PST- fold- FV (6blankets by laying them on bed)
 ‘Women folded the blankets (by laying them on bed)’

5.3.4.1.9 Manner/Instrument adjunct modification

Causative sentences with *bend* verbs examined in this study demonstrate that manner and instrument adjunct modifications are acceptable. The two adjuncts modify external arguments as also evidenced with other causative variants examined in this chapter. In terms of aspectual properties, the sentence in (289a) is interpreted as a process event, whereas (289b) denotes a result state reading. The perfective aspect in (289b) ascribes a logical culmination to the event, hence it is infelicitous with a manner adjunct.

- (289) a. *waka walelema masulya (uwin)/(na pasi)*
wa-ka wa- le- lem- a masulya (uwin)/(na pasi)
 2-woman 2AGRs-PST- fold- FV 6blankets (quickly)/(by 9iron)
 ‘Women folded blanket (quickly)/(by means of iron)’
- b. *waka walemelema masulya (*uwin)*
*wa-ka wa- le- me-lem- a masulya (*uwin)*
 2-woman 2AGRs-PST- PERF-fold- FV 6blankets (*quickly)
 ‘Women had (already) folded the blanket (*quickly)’

5.3.4.2 Anticausativity of *bend* verbs

It has been established that externally caused change of state verbs can be used transitively and intransitively. Similarly to *break*, *cut*, and *cook* verbs presented in the previous sections, *bend* verbs demonstrate anticausative properties, as discussed in the next subsections.

5.3.4.2.1 Anticausatives with prepositional phrase

The anticausative variants of *bend* verbs analyzed in this study illustrate that while the *na*-phrase is unacceptable in all anticausative constructions, the *ko*-phrase is compatible, as (290) demonstrates.

- (290) *masulya walelemika (*na wana)/(ko wana)*
*masulya wa- le- lem- ik- a (*na wa-na)/(ko wa-na)*
 6blankets 6AGRs-PST- fold- STAT-FV (by 2-child)/ (to 2-child)
 ‘The blankets were foldable (*by the children)/ (to the ability/possibility of the children)’

The *na*-phrase and *ko*-phrase are two PP-like elements with different distributions and interpretations in Kiwoso. It has been demonstrated that *na*-phrase is an agentive phrase that points to the presence of an external agent argument in passive verb clauses and, therefore, unacceptable with anticausative variants. On the other hand, *ko*-phrase co-occurs with anticausatives, and introduces event modifiers.

5.3.4.2.2 Agent-oriented adverbial modification

It has been pointed out from the onset of this section that anticausative variants of *bend* verbs are incompatible with an agent external argument. Given the fact that agent-oriented adverbials reflect the presence of such an argument, these modifiers are illicit with anticausative sentences because anticausative sentences lack agent inferences, as (291) demonstrates.

- (291) *masulya walelemika (*kirango)*
*masulya wa- le- lem- ik- a (*ki-rango)*
 6blankets 6AGRs-PST- fold- STAT-FV (*with clever)
 ‘The blankets were foldable/became folded (*cleverly)’

5.3.4.2.3 Purpose clause modification

The examined anticausative variants in sections 5.3.1.2.4, 5.3.2.2.3, and 5.3.3.2.3 demonstrate that purpose phrases or clauses which modify agent argument cannot co-occur with anticausatives. Anticausative constructions of all *bend* verbs analyzed for the purpose of this study demonstrate that purpose clauses cannot modify anticausative sentences, as (292) exemplifies.

- (292) *masulya walelemika (*kusudu wasurumwe)*
*masulya wa- le- lem- ik- a (*kusudu wasurumwe)*
 6blankets 6AGRs-PST- fold- STAT-FV (*so that they are kept)
 ‘Blankets were foldable/became folded (*so that they are kept)’

5.3.4.2.4 Reason phrase modification

The results of this study demonstrate that anticausative sentences of *bend* verbs are compatible with reason phrases and clauses, as the phrase *ko sababu yoopepo* in (293) illuminates.

(293) *masulya walelemika (ko sababu yoopepo)*

masulya wa- le- lem- ik- a (ko sababu ya upepo)

6blankets 6AGRs-PST- fold- STAT- FV (because of 11wind)

‘The blankets were foldable (because of the wind)’

5.3.4.2.5 Temporal clause modification

Anticausatives of *bend* verbs denote a Stative event. It has been established that in Kiwoso, time frame adverbials such as *nusu saa* ‘in half an hour’ are compatible with anticausative sentences of *bend* verbs. By contrast, durative modifiers like *ko nusu saa* ‘for half an hour’ are unacceptable, as (294a) demonstrates. It has also been noted that time frame adverbial shifts the interpretation of the aspectual property of the sentence from a Stative to an Accomplishment event.

(294) a. *masulya walelemika (*ko nusu saa)/(nusu saa)*

*masulya wa- le- lem- ik- a (*ko nusu saa)/(nusu saa)*

6blankets 6AGRs-PST- fold- STAT- FV (*for half hour)/(half hour)

The blankets were foldable/became folded (*for half an hour)/(in half an hour)

b. *masulya walemelemika (*ko nusu saa)/(*nusu saa)*

*masulya wa- le- me- lem- ik- a (*ko nusu saa)/(nusu saa)*

6blankets 6AGRs-PST- PERF fold- -STAT-FV (*for half hour)/ (half hour)

‘The blankets had (already) became folded (*for half an hour)/ (*in half an hour)’

Sentence (294b) has a result state interpretation as a result of perfective aspect, thus it cannot co-occur with temporal adverbials.

5.3.4.2.6 Causing event modification

It has been demonstrated in the previous sections that both the causative and anticausative variants of externally caused verbs permit the causing event modifications. Whereas in the causative variants the causing event modifies the agents, in the anticausatives it modifies the event as a whole. All *bend* verbs examined in this study illustrate that anticausative variants license a causing event modification, as evidenced in (295).

(295) *masulya walelemika (kweebusuya muda)*

masulya *wa-* *le-* *lem-* *ik-* *a* (*kweebusuya muda*)

6blankets 6AGRs-PST- fold- STAT-FV (by pouring 9water)

‘The blankets were foldable (by pouring water (on them))’

5.3.4.2.7 Manner/Instrument adjunct modification

Similarly to causing event, manner and instrument adjuncts are acceptable in all anticausative constructions of *bend* verbs, as (296a) illustrates. Similarly to other externally caused change of state verbs examined in this section, *bend* verbs with a perfective aspect do not accept manner modification, as (296b) evidences. In their simple forms, *bend* verbs with a manner adjunct denote a process (i.e. activity) event, but when they appear with the perfective aspect morpheme, they denote a result state interpretation.

(296) a. *masulya walelemika (uwini)/(ko pasi)*

masulya *wa-* *le-* *lem-* *ik-* *a* (*uwini*)/(*ko pasi*)

6blankets 6AGRs-PST-fold- STAT-FV (quickly)/(with 9iron)

‘The blankets were foldable/became folded (quickly)/(with iron)’

b. *masulya walemelemika (*uwini)*

masulya *wa-* *le-* *me-* *lem-* *ik-* *a* (**uwini*)

6blankets 6AGRs-PST-PERF- fold- STAT-FV (*quickly)

‘The blankets had (already) become folded (*quickly)’

5.3.4.3 The passive sentences of *bend* verbs in Kiwoso

In Kiwoso, *bend* verbs can occur in causative, anticausative, as well as in passive verb forms. The properties of the two variants, i.e. causative and anticausative in relation to argument

realization have been discussed in the previous sections. This subsection is devoted to explore properties of the passive variant of *bend* verbs in Kiwoso.

5.3.4.3.1 Passivization with prepositional phrase

It has been evidenced that causative variants of externally caused change of state verbs in Kiwoso license external arguments that can be reintroduced in passive through *na*-phrase. Bend verbs examined in this study demonstrate similar results, as example (297) illustrates. The prepositional *na*-phrase which introduces an implicit argument points to the presence of an agent argument which is semantically present in any passive sentence in Kiwoso.

(297) *masulya walelemo (na wana)/ (*ko wana)*

masulya *wa-* *le-* *lem-o* *(na wa-na)/ (*ko wa-na)*

6blankets 6AGRs-PST- fold-PASS (by 2-child)/ (*to 2-child)

‘The blankets were folded (by the children)/ (*to the ability of the children)’

Note that whereas the *na*-phrase ‘by-phrase’ is compatible with passive, the *ko*-phrase is unacceptable, as (297) demonstrates. It has been pointed out that the compatibility of agentive phrase signifies the understood (or implicit) agent in passive verb sentences.

5.3.4.3.2 Agent-oriented adverbial modification

It has been established that passives are similar to their corresponding causatives in relation to agentive modifiers. The example sentences from Kiwoso demonstrate that modifications that point to the presence of agent arguments can co-occur with all causative and passive sentences in Kiwoso. Passive constructions of *bend* verbs analyzed in this study exhibit similar results, as (298) exemplifies.

(298) *masulya walelemo (kirango)*

masulya *wa-* *le-* *lem-* *o* *(ki-rango)*

6blankets 6AGRs-PST- fold- PASS (with clever)

‘Blankets were folded (cleverly)’

5.3.4.3.3 Purpose clause modification

All members of *bend* verbs examined in Kiwoso demonstrate the presence of an implicit agent arguments. The presence of agent arguments in passive variants license purpose clause modification, as sentence (299) demonstrates.

(299) *masulya walelemo (kusudi wasurumwe)*

masulya wa- le- lem- o (kusudi wasurumwe)

6blankets 6AGRs-PST- fold- PASS (so that they are kept)

‘Blankets were folded (so that they are kept)’

5.3.4.3.4 Reason clause modification

The passive constructions of *bend* verbs demonstrate that all members of this category can also be modified by a reason phrase or clause, as the phrase *ko sababu ya bheenu* ‘because of visitors’ in (300) illustrates.

(300) *masulya walelemo (ko sababu ya bheenu)*

masulya wa- le- lem-o (ko sababu ya bha inu)

6blankets 6AGRs-PST- fold-PASS (because of 2-visitor)

‘Blankets were folded (because of the visitors)’

5.3.4.3.5 Temporal clause modification

It has been pointed out that the causative variants of *bend* verbs license both durative and time frame adverbials, however, with different aspectual interpretations. Similarly, the passive constructions of these verbs allow both durative and time frame adverbials, as exemplified in (301).

(301) a. *masulya walelemo (ko nusu saa)/ (nusu saa)*

masulya wa- le- lem-o (ko nusu saa)/ (nusu saa)

6blankets 6GRs-PST- fold-PASS (for half hour)/ (half hour)

‘Blankets were folded (for half an hour)/ (in half an hour)’

- b. *masulya walelelemo (*ko nusu saa)/(*nusu saa)*
*masulya wa- le- me- lem-o (*ko nusu saa)/(*nusu saa)*
 6blankets 6AGRs-PST- PERF- fold-PASS (*for half hour)/(*half hour)
 ‘Blankets had (already) been folded (*for half an hour)/(*in half an hour)’

Similarly to their causative counterparts, passive sentences with *bend* verbs in combination with the perfective grammatical aspect disallow temporal adverbials. The perfective morpheme in (301b) assigns a completive interpretation to the event denoted by the verb and, therefore, it is illicit with a time frame adverbial modification, as (301b) demonstrates.

5.3.4.3.6 Causing event modification

All examined members of *bend* type verbs demonstrate that passive constructions of these verbs can appear with causing event modifiers. The clause *kweebhika kitaren* ‘by laying them on bed’ modifies an implicit argument in (302).

- (302) *masulya walelelemo (kweebhika kitaren)*
masulya wa- le- lem-o (kweewabhika kitaren)
 6blankets 6AGRs-PST- fold-PASS (by laying them on bed)
 ‘The blankets were folded (by/through laying them on the bed)’

5.3.4.3.7 Manner/Instrument adjunct modification

The results of the analyzed passive constructions demonstrate that both manner and instrument adjuncts are compatible with *bend* verbs, as (303) illustrates. These adjuncts modify the understood implicit argument in the sentence.

- (303) a. *masulya walelelemo (nicha)/(ko pasi)*
masulya wa- le- lem- o (nicha)/(ko pasi)
 6blankets 6AGRs-PST- fold- PASS (well)/(with 9iron)
 ‘The blankets were folded (well)/ (with iron/by means of iron)’

- b. *masulya walemelemo (*nicha)*
*masulya wa- le- me- lem- o (*nicha)*
 6blankets 6AGRs-PST- PERF- fold- PASS (*well)
 ‘The blankets were folded (*well)’

Similarly to other passive sentences analyzed in relation to their co-occurrence with manner adjunct and grammatical aspect, the passive forms of *bend* verbs demonstrate that passive sentences with perfective aspect morpheme does not permit a manner adjunct, as (303b) illustrates.

5.3.4.4 Middle constructions

The middle constructions of the *bend* type verbs examined behave similarly to middle forms of *break*, *cut*, and *cook* verbs examined in sections 5.3.4.1, 5.3.4.2 and 5.3.4.3, respectively. Similarly to other change of state verbs, middle constructions of *bend* verbs demonstrate that the generic property of these sentences is ascribed to the grammatical subjects. In other words, the attributes of the verb in middle sentences, exclusively refer to the argument occurring as the grammatical subject. This fact can be evidenced in examples (304) and (305).

- (304) *shuka tilemika nicha (*na waka)/(*kirango)*
*shuka ti- lem- ik- a- a nicha /(*na wa-ka)/(*kirango)*
 10bedsheets 10AGRs-fold- STAT-FV- HAB well (by2-woman)/(clever)
 ‘Bedsheets fold well (*by women)/ (*cleverly)’
- (305) *mabati achina alemikaa (*na womi)/(*kirango)*
*mabati achina wa- lem- ik- a- a (*na womi)/(*kirango)*
 6iron-sheets of china 6AGRs-bend-STAT- FV- HAB (by men)/ (with clever)
 ‘Chinese iron sheets bend easily (*by men)/ (*cleverly)’

The middle sentences in (304) and (305) demonstrate that it is the properties of the grammatical subjects *shuka* ‘bedsheets’ in (304) and *mabati achina* ‘chinese iron sheets’ in (305) that make the event of ‘folding’ and ‘bending’ possible events, that can be done well and easily by anyone.

Notice that, given that middle constructions of externally caused change of state verbs ascribe the dispositional and generic property to the argument occurring as the grammatical subject,

agentive modifiers and purpose clauses are incompatible with these sentences. Sentence (306) exemplifies the unacceptability of purpose clauses in middle sentences.

(306) *mabati achina alemikaa (*kusudi alakumbwe)*

*mabati achina wa- lem- ik- a- a (*kusudi alakumbwe)*

6iron-sheets of china 6AGRs-bend- STAT-FV- HAB (so that they are not sold)

Chinese iron-sheets bend easily (*so that they are not sold)

Table 25 summarizes characteristics of *bend* verbs in combination with different modification.

ECCSV in Kiwoso	CAUSATIVE											PASSIVE											ANTICAUSATIVE											MIDDLES				
	DIAGNOSTICS											DIAGNOSTICS											DIAGNOSTICS											DIAGNOSTICS				
	Agent	Instrument	Causers	Agent-adv	Purpose clause	Reason clause	For-adj	In-adj	Causing event	Instr-adi	Manner adi	Agent	Instrument	Causers	Agent-adv	Na- phrase	Purpose clause	Reason clause	For-adj	In-adj	Causing event	Instrument-adj	Manner-adj	Agent	Instrument	Causers	Agent-adv	Ko- phrase	Purpose clause	Reason clause	For-adj	In-adj	Causing event	Instrument-adj	Manner-adj	Agent-adv	Purpose clause	PPs
fold	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	*	✓	*	✓	*	✓	✓	✓	*	*	✓	*
bend	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	*	✓	*	✓	*	✓	✓	✓	*	*	✓	*
wrinkle	✓	✓	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	*	✓	*	✓	*	✓	✓	✓	*	*	✓	*

Table 25: Summary of the properties of *bend* verbs with different modifiers in Kiwoso

In sum, section 5.3 discusses the properties of causative, anticausative and passive sentences of externally caused change of state verbs in relation to argument realization and event semantics. Verbs are presented in clusters that include *break*, *cut*, *cook*, and *bend* verbs. In each category, one typical member of the group is used as a representative sample to exemplify the properties of the respective class. Additionally, these verbs are also examined in relation to middle constructions. The results of the study give evidence that all members display properties of middle alternations, as evidenced in sections 5.3.4.1-5.3.4.4. All externally caused change of state verbs are causative verbs in the sense that they all participate in causative and anticausative alternations.

Based on the diagnostics employed in the causative, anticausative, passive, and middle sentences, it has been established that these constructions behave differently in terms of argument realization. The constructions examined demonstrate that, whereas causative and passive variants license external arguments, anticausative and middle constructions realize event modifiers.

The following section is devoted to the discussion of internally caused change of state verbs in Kiwoso. Similar diagnostics employed in the analysis of externally caused change of state verbs are also used to examine the behaviour of internally caused verbs in relation to argument realization and causation in general.

5.4 Internally caused change of state verbs in Kiwoso

It has been realized that internal causation is an important part in any analysis of causative alternation as much as external causation (cf. Alexiadou 2014). Internally caused change of state verbs have been characterized as verbs of entity-specific change of state or verbs of entity-specific mode of being (Levin 1993; Levin & Rappaport Hovav 1995). Generally, internally caused verbs describe properties inherent to the entities undergoing the change of state. Unlike external causation in which the change of state is externally controlled, internal causation is determinate of the properties of the entity undergoing the change of state (see Levin & Rappaport Hovav 1995; Alexiadou et al. 2006, 2015, among others). In this section, internally caused change of state verbs in Kiwoso, namely *wara* ‘blossom/bloom’, *naa* ‘wither/wilt’, *boo* ‘rot/decay’, *buluka* ‘blister’, and *shimba* ‘swell’ are examined in respect to various diagnostics to establish their properties of causative alternation and argument realization in Kiwoso. The discussion focuses on *wara* ‘blossom’ and *naa* ‘wither/wilt’ verbs, but uncommon cases are identified and described accordingly in the body of text.

5.4.1 Causative variants

It has been demonstrated that across languages, majority of internally caused change of state verbs lack causative alternates (cf. Levin & Rappaport Hovav 1995; Levin 2009). However, other scholars (Mckoon & Macfarland 2000; Wright 2001; Alexiadou 2014; Rappaport Hovav 2014) have noted that a subset of these verbs in languages such as English and Greek do causativize. The results of this study give evidence that all internally caused verbs in Kiwoso cannot be used causatively, as examples in (307) and (308) illustrate.

- (307) a. **waka walewara soko*
 wa-ka wa- le- war- a soko
 2-woman 2AGRs-PST- blossom-FV 10beans
 ‘*Women blossomed the beans’
- b. **(ikumbi)/(mmbo) (lyi)/(i)/lewara soka*
 ikumbe (lyi)/(i)- le- war- a soka
 5hoe/sun 5/9AGRs/- PST- blossom-FV 10beans
 ‘*The hoe/rain blossomed the beans’
- (308) a. **Anna nyalenaa nyanyi*
 Anna ni- a- le na- a nyanyi
 Anna INIT- AGRs-PST- wilt- FV 10vegetables
 ‘*Anna wilted the vegetables’
- b. **ndoo/mmbari i/ulenaa nyanyi*
 ndoo/mmbari i/u- le- na- a nyanyi
 9bucket/sunlight 9AGRs-PST- wilt- FV vegetable
 ‘*The bucket/sunlight wilted the vegetables’

The examples in (307) and (308) demonstrate that internally caused change of state verbs as the name ‘internally caused’ suggests, describe and present eventualities that do not require external intervention for their occurrences. The change of state prescribed by these verbs are conceived as inherent to the entity undergoing the change, and nothing external can directly be construed as the cause of the change of state denoted by these verbs. Due to this characteristic, internally caused change of state verbs lack a causative use and, therefore, external arguments such as agent, instrument, and natural force cannot co-occur with these verbs, as examples in (307) and (308)

evidence. Generally, the results of this study demonstrate that internally caused verbs are typically intransitive, as substantiated in the discussion and diagnostics applied in 5.4.2.

Notice that while internally caused change of state verbs in Kiwoso lack causative use, these verbs are widely found in morphological causatives, as (309) and (310) demonstrate.

(309) *mmbo ilewarisa soko*

mmbo i- le- war- is- a soko
 9rain 9AGRs-PST- blossom-CAUS-FV 10beans
 ‘The rain made the beans blossom’

(310) *mmbari ulenarisa nyanyi*

mmbari u- le- nar- is- a nyanyi
 9sun 9AGRs-PST- wither-CAUS-FV 10vegetable
 ‘The sunlight made the vegetable wither’

Instances of periphrastic (morphological) causativization such as (309) and (310) have been characterized as indirect causation (see Bittner 1999; Piñón 2001; Alexiadou et al. 2006). There has also been studies in Bantu languages that characterize verbs with the morphological causative as indirect causation. Good (2005, 2007) for example, asserts that in Bantu languages, the constructions with the causative morpheme convey a type of causative semantics in which the causer of an action is distinct from an agent of such action. He maintains that causativized verbs marked by causative morpheme denote indirect causation. However, the concept of internal causation discussed in this study differ from the causation illustrated in (309) and (310). The internal causation discussed in this study focuses on direct causation, which is necessarily realized by the roots in combination with a Voice and vCaus components, rather than morphological morphemes (see discussion in chapter 1, section 1.8.1).

5.4.2 Anticausative variants

It has been demonstrated in the previous sections that anticausative forms of all externally caused change of state verbs in Kiwoso are marked by the morpheme *-ik-* (see sections 5.3.1.2, 5.3.2.2, 5.3.2.3 and 5.3.4.2). However, anticausative variants of internal causation verbs in Kiwoso are unmarked, as examples in this section demonstrate. Generally, an analysis of sentences of internally

caused change of state verbs demonstrate that these verbs are essentially anticausatives, as the discussions in the following subsections demonstrate.

5.4.2.1 Prepositional phrase modification

Anticausative constructions of internally caused change of state verbs illustrate that these verbs cannot co-occur with agent or instrument implicit arguments, but they can accept natural forces, as demonstrated in (311) and (312).

(311) *soko tilewara (*na waka)/(ko mmbo)*

soko *ti-* *le-* *war-* *a* *(*na wa-ka)/(ko mmbo)*
 10beans 10AGRs-PST-blossom-FV (by 2-woman)/ (?with rain)
 ‘Beans blossomed (*by women)/ (through rain)’

(312) *nyanyi tilenaa (*na waka/*na nungu)/(?ko mmbari)*

nyanyi *ti-* *le-* *na-* *a* *(*na wa-ka)/(*na nungu)/(ko mmbari)*
 10vegetable 10AGRs-PST-wilt- FV (by 2-woman)/ (by 9pot)/ (with sun)
 ‘Vegetable wilted (*by women/ (*pot)/ (through sunlight)’

Kiwoso speakers comment that natural forces introduced by the *ko*-phrase are interpreted or regarded as the reasons or factors that facilitate the happening of the events, rather than the direct causers of the events. Therefore, *ko mmbo* ‘by/through rain’ and *ko mmbari* ‘by/through sunlight’ phrases in (311) and (312) are perceived as conditions that contribute to the coming about of the events (see Rappaport Hovav 2014). In other words, the sentence *soko tilewara ko mmbo*, for example, is construed as ‘*the beans blossomed because of the rain*’ or ‘*the rain facilitates or contributes to the blossoming of the beans*’

5.4.2.2 Agent-oriented adverbial modification

It has been established in the previous subsections that the anticausative variants of externally caused change of state verbs do not allow agentive modifiers. The internally caused change of state verbs examined in this study display similar results, as examples (313) and (314) demonstrate.

(313) *soko tilewara (*kirango)*

soko *ti-* *le-* *war-* *a* *(*kirango)*
 10beans 10AGRs-PST-blossom-FV (with clever)
 ‘The beans blossomed (*cleverly)’

- (314) *maare walenaa (*ko makusudi)*
*maare wa- le- na- a (*ko makusudi)*
 6grasses 6AGRs-PST- wilt- FV (with purpose)
 ‘The grasses wilted (*purposely)’

5.4.2.3 Purpose clause modification

Similarly to agentive phrases, internal causation eventualities in Kiwoso cannot be modified by clauses that require control of an external argument. This being the case, purpose clauses are unacceptable, as (315) and (316) exemplify.

- (315) *soko tilewara (*kusudi tingane)*
*soko ti- le- war- a (*kusudi tingane)*
 10beans 10AGRs-PST-blossom-FV (*so that they grow)
 ‘The beans blossomed (*so that they grow)’

- (316) *maare walenaa (*kusudi ambyee)*
*maare wa- le- na- a (*kusudi abwyee)*
 6grasses 6AGRs-PST- wilt- FV (*so that they decay)
 ‘The grasses wilted (*so that they decay)’

5.4.1.5 Reason clause modification

The sentences examined demonstrate that the anticausative variants of internally caused change of state verbs in Kiwoso can co-occur with reason phrases and clauses, as examples (317) and (318) demonstrate.

- (317) *soko tilewara (ko sababu ekaba dawa)*
soko ti- le- war- a (ko sababu ekaba dawa)
 10beans 10AGRs-PST-blossom-FV (because of spreading chemicals)
 ‘Beans blossomed (because of spreading chemicals)’

- (318) *maare walenaa (ko sababu ebhika mmbari)*
maare wa- le- na- a (ko sababu ebhika mmbari)
 6grasses 6AGRs-PST- wilt- FV (because of exposing in the sun)
 ‘The grasses wilted (because of exposing in the sunlight)’

5.4.1.6 Temporal phrase modification

The anticausative constructions of internally caused change of state verbs analyzed in relation to temporal aspectual properties give evidence that members of this group behave differently as far as temporal adverbials are concerned. Whereas others can appear with durative adjunct modifiers, others do not, as evidenced in (319a) and (320a).

- (319) a. *soko tilewara (ko wiiki isadu)/(?wiiki isadu)*
soko ti- le- war- a (ko wiiki isadu)/(?wiiki isadu)
 10beans 10AGRs-PST-blossom-FV (for week three)/(?week three)
 ‘Beans blossomed (for three weeks)/(?in three weeks)’
- (320) a. *maare walenaa (?ko dakika tanu)/(dakika tanu)*
maare wa- le- na- a (?ko dakika tanu)/(dakika tanu)
 6grasses 6AGRs-PST- wilt- FV (?for minute five)/(minute five)
 ‘The grasses wilted (?for five minutes)/(in five minutes)’

The verb *wara* ‘blossom’ is compatible with a durative phrase adjunct, but speakers’ judgements showed uncertainty about the permissibility of the time frame adverbial, as evidenced in (319a). With the durative adverbial, the sentence entails that the event had occurred in the past three weeks. On the other hand, *naa* ‘wilt/wither’ can be modified by time frame adverbial with the entailment that the event occurred in an interval of five minutes. However, speakers’ acceptability judgements were uncertain regarding the durative adverbial modification, as (320a) exemplifies.

It has also been evidenced that internally caused change of state verbs have different aspectual interpretations when they co-occur with the perfective grammatical aspect. Similarly to externally caused change of state verbs, sentences with internally caused change of state verbs with the perfective aspect morpheme do not allow temporal modification, as (319b) and (320b) illustrate. The two sentences entail that the events denoted by those verbs have been completed, thus non-dynamic. Such interpretations are distinct from the ongoing dynamic events construed in sentences (321a) and (322a).

- (321) a. *soko tilemewara (*ko wiiki isadu)/(*wiiki isadu)*
*soko ti- le- me- war- a (*ko wiiki isadu)/(*wiiki isadu)*
 10beans 10AGRs-PST-PERF- blossom-FV (*for week three)/(*week three)
 ‘Beans had (already) blossomed (*for three weeks)/(*in three weeks)’

- (322) b. *maare walemenaa (*ko dakika tanu)/(*dakika tanu)*
 maare wa- le- me- na- a (*ko dakika tanu)/(*dakika tanu)
 6grasses 6AGRs-PST-PERF-wilt- FV (*for minute five)/(*minute five)
 ‘The grasses had (already) wilted (*for five minutes)/(*in five minutes)’

5.4.1.7 Causing event modification

Anticausative example sentences examined in Kiwoso prove that all internally caused verbs can occur with the causing event, as (323) and (324) illustrate.

- (323) *soko tilewara (kweenisa kila siku)*
 soko ti- le- war- a (ko inisa kila siku)
 10beans 10AGRs-PST-blossom-FV (by irrigating everyday)
 ‘Beans blossomed (by/through irrigating everyday)’

- (324) *maare walenaa (kweewabhika mmbari)*
 maare wa- le- na- a (kweewabhika mmbari)
 6grasses 6AGRs-PST- wilt- FV (by keeping in sunlight)
 ‘The grasses wilted (by keeping them in sunlight)’

5.4.1.8 Manner/Instrument adjunct modifications

Unlike externally caused change of state verbs in Kiwoso, internally caused change of state verbs do not accept instrument modifiers. However, manner adjuncts are compatible with sentences containing these verbs, and they modify the events described by the verbs, as (325a) and (326a) demonstrate. The constructions demonstrate that similarly to externally caused change of state verbs, internally caused change of state verbs’ sentences in combination with perfective morpheme cannot co-occur with manner adjuncts, as exemplified in (325b) and (326b). Sentences without the perfective aspect in (325a) and (326a) have an ongoing dynamic event interpretation, while (325b) and (326b) denote completed event, thus non-dynamic.

- (325) a. *soko tilewara (nicha/uwin)/ (*ko ikumbi)*
 soko ti- le- war- a (nicha/uwin)/(*ko ikumbi)
 10beans 10AGRs-PST- blossom-FV (well/fast)/*(by hoe)
 ‘Beans blossomed (well/fast)/ (*by means of a hoe)’

b. *soko tilemewara (*nicha/uwin)*

soko *ti-* *le-* *me-* *war-* *a* (**nicha/uwin*)

10beans 10AGRs-PST-PERF-blossom-FV (**well/fast*)

‘Beans had (already) blossomed (**well/fast*)’

(326) a. *maare walenaa (bhicho/uwin)/ (*ko ubanga)*

maare *wa-* *le-* *na-* *a* (*bhicho/uwin*)/(**ko kyaandu*)

6grasses 6AGRs-PST-wilt- FV (*bad/fast*)/ (**by knife*)

‘The grasses wilted (*badly/fast*)/ (**by means of a knife*)’

b. *maare walemenaa (bhicho/uwin)*

maare *wa-* *le-* *me-* *na-* *a* (*bhicho/uwin*)

6grasses 6AGRs-PST- PERF- wilt- FV (*bad/fast*)

‘The grasses had (already) wilted (**badly*)/ (*fast*)’

The internally caused change of state verbs examined demonstrate that these verbs are basically anticausatives. However, unlike the externally caused change of state verbs which require special morphology in their anticausative forms, internally caused verbs are morphologically unmarked. Internally caused change of state verbs do not license agentive phrase or clauses, as evidenced in examples (313-316). Instrument adjunct modifiers are also incompatible with these verbs, but manner adjuncts modifying events are acceptable.

In summary, the internally caused change of state verbs examined in Kiwoso demonstrate that these verbs lack a causative use, thus they do not passivize. These verbs exhibit typical anticausative properties and, therefore, legible to be classified as inherently anticausative verbs. Whereas causative variants of externally caused change of state verbs license varieties of external arguments, namely agents, instruments, and causers, internal causation do not license any of the external argument. This is because the eventualities they denote cannot be controlled externally. The results of the characteristics of causative and anticausative constructions of internally caused change of state verbs with various diagnostics as examined in Kiwoso are summarized in table 26.

ICCSV in Kiwoso	CAUSATIVE			ANTICAUSATIVE												
	DIAGNOSTICS			DIAGNOSTICS												
	Agent	Instrument	Causers	Agent	Instrument	Causers	Agent-adv	Purpose clause	Reason clause	PPs		Temp-adj		Causing event	Instrument-adj	Manner-adj
										Ko-PP	Na-pp	For-adj	In-adj			
<i>wara</i>	*	*	*	*	*	*	*	*	✓	✓	*	✓	?	✓	*	✓
<i>naa</i>	*	*	*	*	*	*	*	*	✓	✓	*	?	✓	✓	*	✓
<i>boo</i>	*	*	*	*	*	*	*	*	✓	✓	*	*	*	✓	*	✓
<i>buluka</i>	*	*	*	*	*	*	*	*	✓	✓	*	✓	✓	✓	*	✓
<i>shimba</i>	*	*	*	*	*	*	*	*	✓	✓	*	*	*	✓	*	✓

Table 26: Kiwoso internally caused change of state verbs with various modifiers

5.5 Argument realization and causation with change of state verbs in Kiwoso

This section presents an analysis and the synthesis of the findings of the study based on the example sentences described in section 5.3. It offers an analysis of change of state verbs in relation to external argument realization and (anti-)causative alternations based on the adopted theoretical framework of the study. Following proposals from the syntactic decomposition approach, event decomposition for causative, anticausative, passive, as well as dispositional middle of Kiwoso change of state verbs are presented in this section. The relationship between the anticausative, passive and middle in Kiwoso is discussed in section 5.5.4, and in section 5.6 the aspectual semantic verb classes are explored invoking the findings of the study.

5.5.1 Characteristics of change of state verbs in (anti-)causative alternations

There is a standard assumption in the literature that change of state verbs participate in causative and anticausative alternations (Levin & Rappaport Hovav 1995; Schäfer 2008, 2009). This assumption is borne out for Kiwoso because according to Kiwoso native speakers' judgements, all externally caused change of state verbs examined in this study exhibit causative alternations (see section 5.3 and its subsections). On the other hand, the internally caused change of state verbs discussed in section 5.3 demonstrate that internally caused change of state verbs in Kiwoso are inherently anticausatives, hence they lack causative counterparts. The results of this study also demonstrate that contrary to the widely held view in the literature that agentive verbs do not alternate (see Levin & Rappaport Hovav 1995; Alexiadou et al. 2006, Schäfer 2009, among others), in Kiwoso, verbs such as *manya* 'cut'

(see subsections 5.3.2.1 and 5.3.2.2) and *kora* ‘cook’ in subsections 5.3.3.1 and 5.3.3.2, do alternate. The semantic classes of *cut* and *cook* verbs in Kiwoso denote eventualities that are conceptualized as human-oriented, thus the change of states expressed by these verbs require the participation of intentional human agent to bring about the change described by the verbs. It has also been noted that (see section 5.2) although verbs widely alternate, they are not homogenous. The findings of this study establish that members of semantic verb classes in Kiwoso are not identical in their properties. Within a single class, there are members that alternate, and there are others that do not (see examples in section 5.3.1). This suggests that the encyclopedic lexical semantic properties of the individual root, and how it combines with functional heads, determine its possibilities for alternations. However, the constructions examined give evidence that most change of state verbs alternate, and exhibit systematic argument realization patterns in causative, passive, anticausative, and middle sentences.

Given the alternation patterns of change of state verbs in Kiwoso, this study adopted the syntactic decomposition approach postulated by Alexiadou et al. (2006) and Alexiadou (2010) in order to account for the properties that determine whether change of state verbs in Kiwoso participate in (anti-)causative alternations. Due to the reason that the approach employed in this study is embedded within the perspectives of Distributed Morphology (cf. Schäfer 2008, 2009; Alexiadou et al. 2015), some assumptions of this approach are relatively considered in the analysis of (anti-)causative verbs in Kiwoso. The general assumption shared in all syntactic decomposition approaches (cf. chapter 3, section 3.3.2.3) is that verbal alternation is constrained by lexical classification of verbal roots as well as other non-lexical factors. In particular, the encyclopaedic semantic nature of the root as well as the functional categories that introduce external arguments, namely Voice, as assumed in this study determine the alternation properties of a given verb. Following the proposals put forth in the syntactic decomposition approach, the (anti-)causative alternations of the externally caused change of state verbs in Kiwoso can be explained in terms of the properties of the Root in combination with a vCAUS component. The constructions examined demonstrate that causative and anticausative variants of change of state verbs in Kiwoso involve the same root but differ in terms of functional heads (cf. the discussion in section 5.5.2).

The findings of the study demonstrate that all externally caused change of state verbs, including agentive verbs which are regarded as non-alternating in other languages (see Levin & Rappaport Hovav 1995; Alexiadou et al. 2006; Schäfer 2008, 2009) exhibit (anti-)causative alternations in Kiwoso. This observation suggests that the central meaning components of verbs (i.e. the Roots) which determine conceptualization of events may be language specific, and thus similar verbs describing similar events may be conceived differently in different languages.

It has been pointed out earlier that whereas all externally caused change of state verbs alternate, internally caused verbs in Kiwoso lack causative variants. However, various diagnostics illustrate that both externally and internally caused change of state verbs in Kiwoso involve causative semantics. It has been evidenced that although internally caused change of state verbs do not license agentive modifiers, these verbs can be modified by causing events, as well as reason clauses (see subsections 5.3.1.5 and 5.3.1.7). These diagnostics give evidence that internally caused change of state verbs involve causation, but the difference is that externally caused change of state verbs involve explicit external arguments (e.g., agent, instrument, and/or causers) with immediate control over eventualities denoted by the verbs. By contrast, internally caused change of state verbs involve implicit cause, and especially some conditions that facilitate the coming about of the change of state. This study has established that internally caused change of state verbs in Kiwoso are unique in that the changes of state they denote are related to the internal properties of an entity that undergoes the change. Therefore, whereas externally caused change of state verbs involve causation with external causer arguments, internally caused change of state verbs denote causations which involve some conditions as facilitating factors for the occurrence of eventualities.

Generally, sentences with externally caused change of state verbs examined in this chapter alternate. The results of this study give evidence that verbs such as *cook*, *cut*, and *grind* denote human-oriented eventualities. These verbs do not alternate in most languages (see Levin 1993; Levin & Rappaport Hovav 1995) but do alternate in Kiwoso. This implies that alternation properties of verbs are to some extent language specific. The findings of this study suggest that verbs that alternate in one language do not necessarily alternate in other languages. For example, whereas *cut* verbs undergo (anti-)causative alternations in Kiwoso, these verbs do not alternate in English (cf. Levin & Rappaport Hovav 1995).

This study demonstrates that there is a clear demarcation between externally and internally caused change of state verbs in that whereas the former display both causative and anticausative forms, the latter lack causative variants. However, it has been established that both externally and internally caused verbs comprise a cause component as various diagnostics such as causing event and reason clause modifications demonstrate.

5.5.2 Event decomposition of change of state verbs in Kiwoso

The studies reviewed in chapter 3 section 3.3 illustrate that one of the central issues discussed in the literature in relation to (anti-)causative alternations is the derivational relationship between the causative and the anticausative variants, and the question of why the anticausative lacks an implicit

external argument (see discussion in subsections 3.3.2.1 and 3.3.2.2). The relationship has been claimed to exist, but the challenge has been to identify which form between the two alternates is basic, as well as the place in which this derivation occurs in the grammar. The proponents of derivational approaches to (anti-)causative alternations justify their assertion based on morphological marking of the two alternates. For example, the form with special morphology is considered to be the derived one whether causative or anticausative.

The constructions examined in Kiwoso demonstrate that all anticausative variants of externally caused change of state verbs presented in sections 5.3.1.2-5.3.5.2 are marked by the stative morpheme *-ik-*, but causative variants are morphologically unmarked (see sections 5.3.1.1-5.3.5.1). On the other hand, internally caused change of state verbs share similar morphology, i.e. unmarked in its transitive and intransitive uses, as evidenced in section 5.3 (see also appendix A). The variations that exist between these verbs prompted the adoption of syntactic decomposition approach that takes causative and anticausative as two variants sharing a common Root. Therefore, to account for the properties of causative and anticausative alternations, this study adopts the syntactic decomposition approach, particularly the proposals by Alexiadou et al. (2006, 2015) and Alexiadou (2010) (cf. chapter 1, section 1.8.1). As pointed out earlier in this section, perspectives from the Distributed Morphology (DM) approach are also considered in the account of anticausative alternations in Kiwoso.

The DM approach assumes that verbs are derived from category neutral roots by the addition of functional heads (Marantz 1997) (see chapter 3, section 3.4 for details). Following this perspective, the syntactic decomposition approach assumes non-derivational approach to (anti-)causative alternations. According to this approach, causative and anticausative verbs are all based on a Root and a Theme that bears a resultant state, and a CAUS component which takes the resultant state as its complement (Alexiadou et al. 2006). Both causative and anticausative verbs are base-generated in that neither variant is derived from the other by either lexical rules or any syntactic transformation. The approach employed in this study also assumes the proposal by Kratzer (1996) that external arguments are not true arguments of the verb, as such they are not introduced by the verb, but by a non-eventive Voice functional head on top of the vP via a process called event identification (see chapter 3, section 3.5). According to this approach, therefore, the causative event and the external argument are not introduced by the same functional head. Whereas vCAUSE introduces causative events, the Voice functional head introduces external arguments. The syntactic decomposition approach postulates that the causative and the anticausative variants of change of state verbs represent core eventualities, and that both variants share event decomposition. This suggests that both causative and anticausative forms contain causative events, hence they involve a vCAUSE head. The two

variants differ in respect to the presence versus absence of a Voice functional head that introduces an external argument.

The approach adopted in this study assumes that all change of state verbs involve a Voice and CAUS component that form the core structure of all causative, anticausative and passive change of state verbs (cf. the discussion in chapter 1, section 1.8.1). These proposals adequately account for the event decomposition of change of state verbs in Kiwoso examined in this study. According to syntactic decomposition approach, the causative sentence of the externally caused verb in (327a), decomposes as (327c), yielding an abstract structure in (328).

- (327) a. *womi walemanya n'ji*
womi wa- le- many- a n'ji
 2man 2AGRs-PST- cut- FV 3tree
 'Men cut the tree'
- b. *womi walememanya n'ji*
womi wa- le- me- many- a n'ji
 2man 2AGRs-PST- PERF- cut- FV 3tree
 'Men had (already) cut the tree'
- c. [womi [Voice [vCAUSE [manya n'ji]]]]

- (328) [Voice (external argument (EA) +agentive (AG)) [vCAUS [$\sqrt{\text{Root}}$]]]

It has also been pointed out that the study of (anti-)causative alternations in Kiwoso invokes aspectual approach. This approach is adopted in order to account for differences among and within semantic verb classes'. The findings of this study demonstrate that change of state verbs have different interpretations depending on the grammatical aspect of a sentence. A sentence with a simple change of state verbs such as simple present or simple past, as in (327a), has a process event interpretation, and denotes an ongoing dynamic event. On the other hand, a sentence with a perfective aspect, as in (327b), has a result state interpretation. This observation entails that when structure (328) is embedded under perfective aspect, the morpheme projects an Aspect phrase (AspP) on top of the Voice phrase. Therefore, the event decomposition of causative verbs acquire the structures as in (329). The schematic representation of the structure in (329) is as illustrated in figure (14).

- (329) a. [TP [AsP_{imperf} [VoiceP [Voice (EA+AG) [vCAUS [$\sqrt{\text{Root}}$]]]]] (+dynamic)
 b. [TP [AsP_{perf} [VoiceP [Voice (EA+AG) [vCAUS [$\sqrt{\text{Root}}$]]]]] (-dynamic)

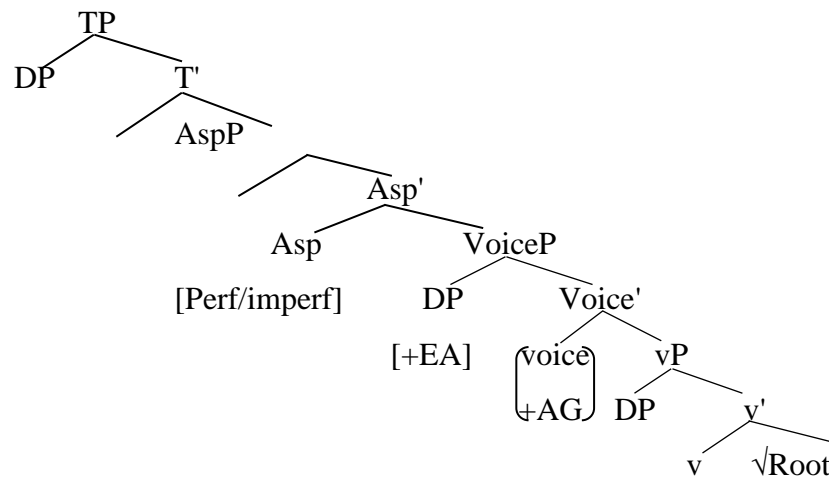


Figure 14: Event decomposition of causative variant of *cut* verbs in Kiwoso

Figure 14 represents causative variants of *cut* verbs in Kiwoso. This structure involves two different functional heads: the Voice head and the vCAUS head (represented as vP). The Voice introduces an external argument (EA), whereas the vP denotes the causative event. The Voice head specifies the relation between the external argument (*womi*) and the *cutting* event. In Kiwoso, *cut* and *cook* verbs, as well as the verb *saka* ‘grind’ are semantically agentive, thus require agentive (AG) external argument, as manifested in figure 14. Basically, external arguments of these verbs are necessarily human agents, and hence characterized as involving agentive Voice (Voice [+AG]). It has also been demonstrated that perfective grammatical aspect influences the interpretation of change of state verbs as either denoting a process event (when it appears in simple forms), and as a result state (when a verb is embedded with a perfective morpheme). This observation suggests that aspect morpheme forms one of the functional heads in the decomposition of change of state verbs in Kiwoso.

According to the syntactic decomposition approach, the (anti-)causative alternation is a Voice alternation. The Voice introduces agent and causer thematic notions. These notions are linked to an agent Voice relation, R(Agent), and causer voice relation R(caus) (see Alexiadou 2010). R (agent) entails that the DP external argument has properties associated with the coming about of the event. On the other hand, the R(caus) simply names or modifies the causing event. It has been established that the decomposition of causative variants of *cut* and *cook* verbs in Kiwoso involves R(agent), whereas the anticausative variants of these verbs yield R(caus), as (330b) demonstrates.

- (330) a. *n'ji ulemanyika*
n'ji u- le- many- ik- a
 3tree 3AGRs-PST- cut- STAT-FV
 'The tree became cut/was cutable'
- b. [vCaus [manyika]]

Similarly to causative variants, the grammatical aspect of a sentence has an implication to the interpretation of the anticausative sentences of *cut* verbs in Kiwoso. As is the case with causative forms, the presence of the perfective aspect in the anticausative constructions assigns a completive event meaning to the event described by the verb. On the other hand, a sentence with a simple verb has process event interpretation in terms of aspectual properties. Therefore, the fact that grammatical aspect determines the aspectual interpretation of the anticausative sentence of *cut* verbs as either denoting process or result state, this morpheme can be interpreted as one of the functional heads in the representation of events. The structure in (331) represents event decomposition of an anticausative sentence of *cut* verbs involving aspect functional head.

- (331) [TP [AsP_{imperf} [VoiceP [Voice (-EA -AG) [vCaus [$\sqrt{\text{Root}}$]]]]] +dynamic
 [TP [AsP_{perf} [VoiceP [Voice (-EA -AG) [vCaus [$\sqrt{\text{Root}}$]]]]] -dynamic

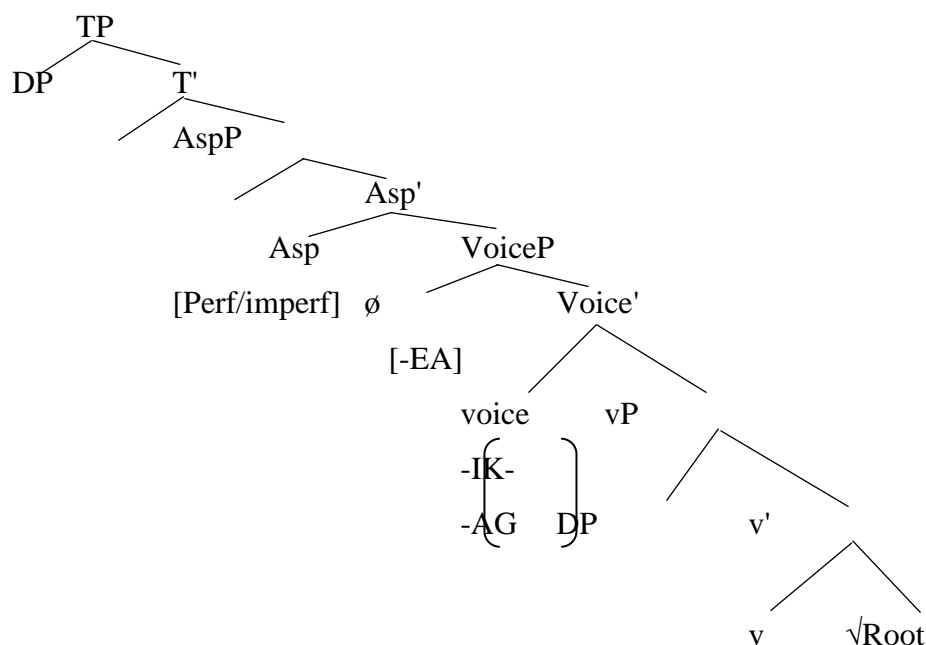


Figure 15: Event decomposition of anticausatives in Kiwoso

It has been pointed out that the anticausative variants in Kiwoso do not license the various external arguments (e.g., agents, instruments, causers) available in most causative forms. However, these properties manifest as modifiers in anticausative variants when they are introduced by *ko*-phrase in vP licensing the vCaus component, which yields the R(caus), as evidenced in (331).

So far, it has been established that both causative and marked anticausative variants in particular, involve a Voice feature, as (329) and (331) exemplify. The internally caused change of state verbs examined in Kiwoso demonstrate that these verbs are inherently anticausative. The anticausative morphological form *-ik-* of externally caused change of state verbs denotes the Voice feature, but also instantiates the absence of an external argument. The property that internally caused change of state verbs are morphologically unmarked suggests the absence of a Voice functional head in the event decomposition of these verbs. However, as for the causative and anticausative variants of externally caused change of state verbs, grammatical aspect also affects the interpretation of the sentences with internally caused change of state verbs. Therefore, event decomposition of internally caused change of state verbs differ from the anticausative variants of externally caused change of state verbs in terms of the presence of a Voice head, but the Aspect functional head is present, as the contrast of sentences (332a) and (332b) illustrates. (332a) denotes a process (i.e. activity) event, which is dynamic, while (332b) denotes result state, which is non-dynamic. Internally caused change of state verbs are decomposed as in (332c).

- (332) a. *soko tilewara*
soko ti- le- war- a
 10beans 10AGRs-PST-blossom-FV
 ‘The beans blossomed’
- b. *soko tilemewara*
soko ti- le- me war- a
 10beans 10AGRs-PST-PERF blossom-FV
 ‘The beans had (already) blossomed’
- c. [TP [AsP_{imperf} [vCaus [$\sqrt{\text{Root}}$]]] +dynamic
 [TP [AsP_{perf} [vCaus [$\sqrt{\text{Root}}$]]] -dynamic

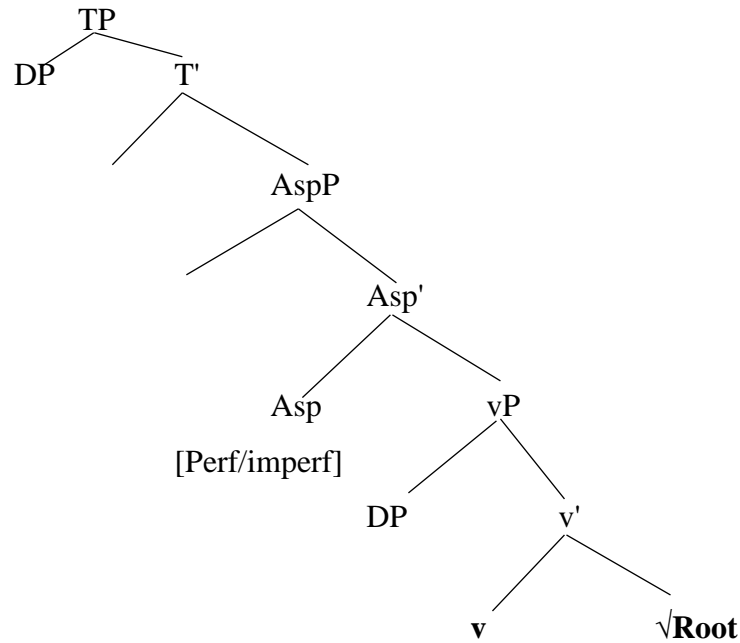


Figure 16: Event decomposition of unmarked anticausative in Kiwoso

The discussion on passive constructions of externally caused change of state verbs presented in subsections 5.2.1.3-5.2.4.3 demonstrates that all verbs can license implicit arguments. In Kiwoso, the implicit arguments in passives are exclusively introduced by the prepositional *na*-phrase ‘by-phrase’. The results of this study demonstrate that passive forms of *break* verbs with the exception of the verb *saka* ‘grind’, license causers as implicit arguments. Therefore, in terms of functional heads, passives are characterized as involving a Voice head, and the same head that introduces a DP agent in the causative (see figure 14), licenses the agentive *by*-phrase in the passive counterpart. Additionally, the grammatical aspect has influence in the interpretation of the passive sentence, just as it is the case with causative and anticausative variants. Generally, passives have the feature (Voice [+/-AG]) in Kiwoso. The implicit agent and instrument arguments are characterized as (Voice [+AG]), while the implicit causer argument has the feature (Voice [-AG]). Examples in (333) and (334) illustrate the three implicit arguments found in Kiwoso passive constructions.

- (333) *kelya kilekoro (na wana)/(na nungu)/(*na mmbari)*
*kelya ki- le- kor- o (na wa-na)/(na nungu)/(*na mmbari)*
 7food 7AGRs-PST- cook- PASS (by 2-child)/ (with 9pot)/ (*by 9sunlight)
 ‘The food was cooked (by the children)/ (by means of a pot)/ (*by sunlight)

- (334) *nungu ilebaaro (na wa-na)/ (neewee)/ (noopepo)*
nungu i- le- baar- o (na wa-na)/ (na iwee)/ (na upepo)
 9pot 9AGRs-PST- break- PASS (by 2-child)/ (by 5stone)/ (by 11wind)
 ‘The pot was broken (by the children)/ (by the stone)/ (by the wind)’

Notice that whereas the natural force implicit argument is illicit in (333), a similar type of argument is acceptable in (334). It has been argued that *cook* verbs denote a human-driven activity, thus it is impossible to license natural force as the controller of the event. By contrast, *break* verbs which do not describe events that require obligatory participation of human agent allow all various types of implicit arguments, as evidenced in (334). In (333), the instrument argument is interpreted as the means employed by an agent to perform the specified event, hence has the feature (Voice [+AG]), while the construction in (334) which involves a non-agentive argument is characterized as (Voice [+/-AG]). Based on the evidenced properties, event decomposition of passives in combination with aspectual functional head in Kiwoso has the structures presented in (335). The schematic representation of structure (335) follows in figure 17.

- (335) [TP [AsP_{imperf} [VoiceP [Voice (-EA +/-AG) [vCaus [$\sqrt{\text{Root}}$]]]]] +dynamic
 [TP [AsP_{perf} [VoiceP [Voice (-EA +/-AG) [vCaus [$\sqrt{\text{Root}}$]]]]] -dynamic

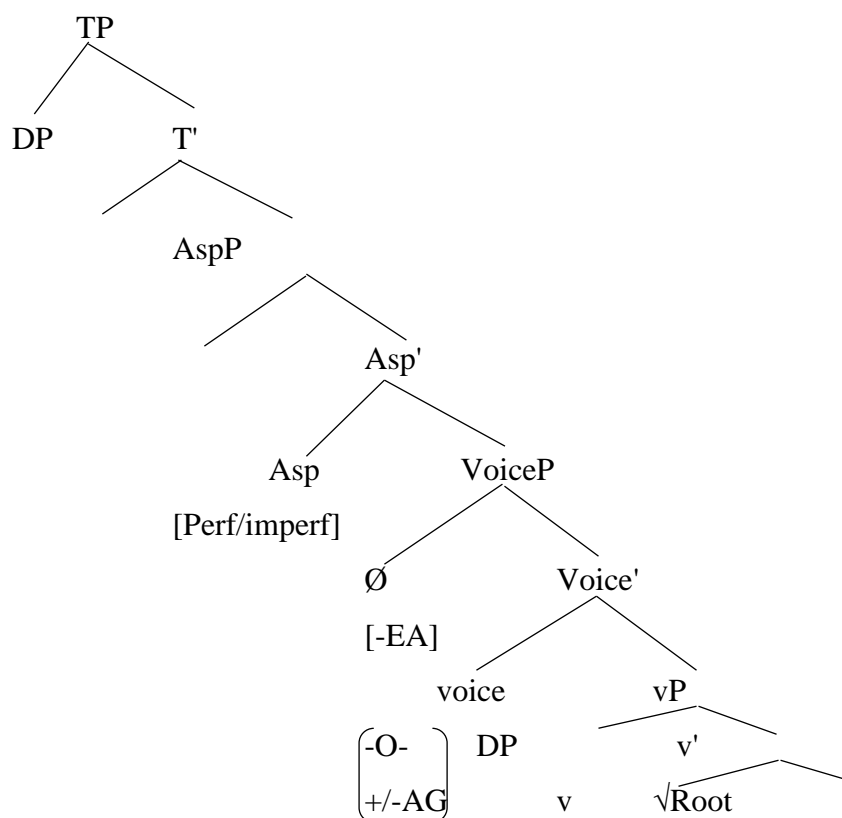


Figure 17: Event decomposition of passive verb constructions in Kiwoso

The decomposition of passive form of *break* verbs in Kiwoso presented in figure 17 is similar to the event decomposition of causative variants presented in figure 14, in that both involve external arguments (i.e. both events are [+EA]). However, in causative forms, the external argument is projected in the specifier position, whereas in passives such thematic role relation is implicit (i.e. it is not overtly expressed). On the other hand, passive and anticausative event decomposition is similar in that both structures lack an external argument (i.e. -EA). However, the decomposition of the two events are distinct in terms of Voice morphology responsible for the introduction of implicit arguments. The stative morpheme *-ik-* (see figure 15) realizes event modifiers, but certainly not an external arguments. The passive suffix *-o-* introduces implicit arguments including agents, instruments and causers and, therefore, has the feature (Voice [+/-AG]) (cf. figure 17).

The Root is the last component involved in the structure of causative, anticausative and passive change of state verbs proposed in the syntactic decomposition approach to (anti-)causative alternations. The verbal Root is regarded as one of the determinant factors as to whether a verb alternates or not (see chapter 3 section 3.3.2.3). It has been established that all externally caused verbs in Kiwoso (see discussion in section 5.3 and its subsections) share similar characteristics, i.e. they alternate. Likewise, the example sentences on internally caused change of state verbs discussed in section 5.4 demonstrated that members of internally caused change of state verbs demonstrate causative events and, therefore, share similar semantic attributes with externally caused change of state verbs. However, the fact that all externally caused change of state verbs examined share some semantic features does not mean that these verbs are identical. Members of externally caused change of state verbs differ from one semantic class to another and also within the same semantic class. The various diagnostics employed in examining these verbs demonstrate that each member of externally caused change of state verbs involves certain idiosyncratic properties that distinguish one member from the other.

Depending on their encyclopaedic semantics, Roots have been categorized into four groups (see Alexiadou et al. 2006) (cf. chapter 1, section 1.8.1). The four classes can be exemplified by Kiwoso change of state verbs, as in (336).

- (336) $\sqrt{\text{agentive}}$ (*manya, kora*)
 $\sqrt{\text{externally caused}}$ (*lema, ratuo*)
 $\sqrt{\text{internally caused}}$ (*wara, naa*)
 $\sqrt{\text{cause unspecified}}$ (*baara, ruo*)

It has been demonstrated that roots in combination with functional heads as well as conceptualization of events compositionally determine properties of change of state verbs in causative alternation (cf. Alexiadou et al. 2015). Agentive roots are conceptualized as denoting non-spontaneous events, caused by intentional human agent. In most languages, agentive roots are characterized as non-alternating (cf. Levin & Rappaport Hovav 1995; Alexiadou et al. 2006; Schäfer 2008, among others). However, as pointed out earlier, the results of this study demonstrate that agentive verbs in Kiwoso can be used transitively and intransitively. Externally caused roots in Kiwoso denote events that cannot occur without an intervention of an external force. It should be noted, however, that unlike agentive roots, these predicates do not obligatorily require the intervention of volitional agent to bring about the change of state. The eventualities they describe can be realized by agents, instruments or causers, as examples in sections 5.3.1-5.3.4 evidence.

The cause unspecified category of roots involves predicates that describe events which may or may not require external intervention for the change of state of the theme argument, as examples of *break* verbs in section 5.3.1 illustrate.

5.5.3 External arguments of change of state verbs in Kiwoso

It has been established that within and across verb classes (cf. section 5.3 and its subsections), agents, instruments, and causers are possible external arguments in Kiwoso sentences with change of state verbs. However, the results of this study demonstrate that the acceptability of one form rather than the other depends on the encyclopaedic information of individual verbal roots, and also on how events are conceptualized. The findings of the present study demonstrate that all externally caused change of state verbs can realize agents and instruments as their external arguments (see sections 5.3.1-5.3.4). However, members of these verbs in Kiwoso display variation in relation to the realization of causers as external arguments. The findings of the constructions examined illustrate that verbs such as *grind*, *cut* and *cook* do not license natural forces (causer arguments) as their external arguments, as evidenced in examples (210), (234), and (258), respectively, repeated here as (337), (338) and (339), correspondingly.

(337) #upepo lulesaka umbi

<i>upepo</i>	<i>lu-</i>	<i>le-</i>	<i>sak-</i>	<i>a</i>	<i>umbi</i>
11wind	11AGRs-PST-	grind-	FV		9millet
'The wind ground the millet'					

- (338) *#upepo lulemanya n'ji*
upepo lu- le- many- a n'ji
 11wind 11AGRs-PST-cut- FV 3tree
 'The wind cut the tree'
- (339) *#upepo lulekora kelya*
upepo lu le- kor- a kelya
 11wind 11AGRs-PST-cook -FV 7food
 'The wind cooked the food'

The results of the study demonstrate that *grind*, *cut* and *cook* verbs in Kiwoso denote human-driven eventualities that require an agent argument with intention to carry out the events denoted by such verbs. Conceptually, natural forces such as wind lack control over such eventualities, thus ruled out as external arguments of the events denoted by these verbs.

It has also been established that although instruments are acceptable subject arguments of Kiwoso change of state verbs, these instrument subjects are conceptualized differently. On the one hand, the findings demonstrate that there are instrument subjects which are construed as prototypically being under permanent control of human agents, as exemplified in (340) and (341).

- (340) *kyaara kilemanya n'ji*
kyaara ki- le- many- a n'ji
 7axe 7AGRs-PST-cut- FV 3tree
 'The axe cut the tree'
- (341) *nungu ilekora kelya*
nungu i- le- kor- a kelya
 9pot 9AGRs-PST-cook- FV 7food
 'The pot cooked some food'

Examples in (340) and (341) involve the pragmatic inference that a human agent was involved in controlling the event, and that the instrument subjects *kyaara* 'axe' and *nungu* 'pot' were just involved as enabling or facilitating participants, but the events of *cutting* and *cooking* were under the control of human agent.

On the other hand, there are instrument subjects which are conceptualized as being inherently eventive, that is, they are involved in the events without necessarily being under permanent control of human agent, as example (208) reproduced here as (342) illustrates.

- (342) *iwee lyilebaara nungu*
iwee lyi- le- baar- a nungu
 5stone 5AGRs-PST- break- FV 9pot
 ‘The stone broke the pot’

Instrument subjects of this type (e.g., *iwee* ‘stone’ in 342) pattern like causers in that they are self-energetic and, therefore, have independent control over eventualities described in the sentence. General observation demonstrates that different conceptualization of instrument subjects of externally caused change of state verbs in Kiwoso is a result of encyclopaedic knowledge about the roots which require certain features such as volitionality, human participant and the like, as part of their verbal semantics. Additionally, other non-linguistic factors such as knowledge of the world, and expectations about how different eventualities occur in the world contribute to the understanding of different arguments structure alternations (cf. Folli 2014).

The results of this study demonstrate further that agents, instruments and causers which appear as DPs in causative variants, surface as PPs in the corresponding passives and anticausatives, as (343) illustrates.

- (343) *nungu ilebaaro (na wana)/(neewee)/(noopepo)*
nungu i- le- baar- o (na wa-na)/(na iwee)/(na upepo)
 9pot 9AGRs-PST- break- PASS (by 2-child)/ (by 5stone)/ (by 11wind)
 ‘The pot was broken (by the children)/ (by means of a stone)/ (by the wind)’
- (b) *nungu ilebarika (ko wana)/(kweewe)/(koopepo)*
nungu i- le- bar- ik- a (ko wa-na)/(ko iwee)/(ko upepo)
 9pot 9AGRs-PST- break- STAT-FV (to 2-child)/ (with 5stone)/ (with 11wind)
 ‘The pot got broken (to the ability/potentiality of the children)/ (by means of stone)/ (from the wind)’

It has been established that the DP nouns realized as external arguments of causative variants in Kiwoso are expressed as PPs in passives and anticausatives (see sections 5.3.1.3.1-5.3.4.3.1 for

passives and sections 5.3.1.2.1-5.3.4.2.1 for anticausatives). The results of the study give evidence that in the passive constructions, agents, instruments and causers as external arguments are introduced solely by the prepositional *na*-phrase, as exemplified in (343a). The DPs expressed as subjects in causative variants are realized by a *ko*-phrase in anticausatives, as (343b) illustrates. However, unlike in passive variants, these expressions are non-thematic in the anticausative constructions. It has been evidenced that in Kiwoso, the *ko*-phrase introduces event modifiers in anticausatives and not event participants. According to the syntactic decomposition approach, *na*-phrase and *ko*-phrase are instances of two different functional heads realized in passive and anticausative sentences, respectively. Therefore, whereas the *na*-phrase is introduced by a Voice head, the *ko*-phrase is introduced by a vCAUS functional head. The *na*-phrase in passives reflects the property of external argument that brings about the coming of the event, while the *ko*-phrase in anticausatives introduces modifiers of the causing event.

Generally, depending on how events are conceptualized, the subject position of externally caused change of state verbs in Kiwoso can be realized by agent, instrument, as well as causers. The same roles are implicitly expressed in the passives of these verbs.

5.5.4 The anticausative, passive and middle alternations in Kiwoso

The change of state verbs examined in section 5.3 and its subsections demonstrate that anticausatives, passives and middles involve argument alternation types which can be construed as operations which alter the grammatical relation of sentences. The sentences examined in Kiwoso demonstrate that the sole argument of anticausative, passive, and middle constructions is the grammatical subject, which is semantically similar to the object argument of the transitive sentence. This fact is evidenced in (344).

- (344) a. *wana walebaara nungu* *causative*
 wa-na *wa-* *le-* *baar-* *a* *nungu*
 2-child 2AGRs-PST- break- FV 9pot
 ‘Children broke the pot’
- b. *nungu ilebaaro* *passive*
 nungu i- *le-* *baar-* *o*
 9pot 9AGRs-PST- break- PASS
 ‘The pot was broken’

- c. *nungu ilebarika* *anticausative*
nungu i- le- bar- ik- a
 9pot 9AGRs-PST- break- STAT- FV
 ‘The pot became broken/was breakable’
- d. *nungu ibarikaa* *dispositional middle*
nungu i- bar- ik- a- a
 9pot 9AGRs-break-STAT- FV- HAB
 ‘The pot breaks (easily)’

The logical object *nungu* ‘pot’ of the transitive variant in (344a) is the grammatical subject of passive, anticausative and middle in (344b-344d). These constructions share the feature that their external argument cannot be expressed. The findings of the example sentences examined in Kiwoso demonstrate that whereas external arguments in passives can be reintroduced via a *na*-phrase ‘by-phrase’, external arguments cannot be expressed in anticausative and middle sentences, (see subsections 5.3.1.2.2, 5.3.2.2.1, 5.3.3.2.1 and 5.3.4.2.1 as well as 5.3.1.4, 5.3.2.4, 5.3.3.4 and 5.3.4.4).

Although the three constructions share some of syntactic properties, there are a number of semantic as well as morphosyntactic diagnostics that distinguish anticausative, passive and middle from each other, as presented and discussed in sections 5.3.1.2-5.3.4.2, 5.3.1.3-5.3.4.3 and 5.3.1.4-5.3.5.4.

The results of the diagnostics employed give evidence that agent-oriented modifiers such as agentive phrases (e.g., *by*-phrase) and agent-oriented adverbials (e.g., *cleverly*) can co-occur with passives, but these phrases are infelicitous with anticausatives and middles. Similarly, purpose phrase or clause modification is compatible with passives but unacceptable in anticausative and middle sentences. Incompatibility of the purpose phrase or clause modification with anticausatives and middles demonstrates that anticausative and middle constructions, unlike passives, designate non-agentive eventualities.

The findings of this study establish further that the dispositional middle sentences are distinct from anticausative and passive constructions in the sense of being generic statements, which lack specific time reference. This has been demonstrated through aspectual properties of these constructions. The results of the study demonstrate that sentences with a dispositional middle interpretation are ungrammatical with a past tense, as evidenced in (345b). Sentences which contain specific time references such as past or future cannot receive middle reading, as (345c) illuminates.

- (345) a. *ubanu lumanyikaa (uwin)*
ubanu lu- many- ik- a- a (uwin)
 11eucalyptus 11AGRs-cut- STAT-FV- HAB (fast)
 ‘Eucalyptus (tree) cuts (fast)’
- b. **ubanu lulemanyikaa (uwin)*
ubanu lu- le many- ik- a- a (uwin)
 11eucalyptus 11AGRs-PST cut- STAT-FV- HAB (fast)
- c. *ubanu lulemanyika (uwin)*
ubanu lu- many- ik- a- a (uwin)
 11eucalyptus 11AGRs-cut- STAT-FV- HAB (fast)
 ‘Eucalyptus (tree) got/became cut (fast)’

The sentences in (345) demonstrate that the middle sentence is distinct in that it is a generic statement that quantify over the grammatical subject. Sentence (345c) instantiates anticausatives which differ from middle in lacking that generic property, thus it clearly indicates a specific time reference. The interpretation of the middle sentence in (345a) entails that all eucalyptus trees have the property that the event of cutting them is fast. That is not the case with anticausative sentence in (345c).

It has been illustrated that unlike passive and anticausatives, middle constructions cannot appear with perfective grammatical aspect. However, all middle sentences in Kiwoso involve the habitual aspect which denotes the generic meaning of these constructions (cf. Schäfer 2009). Therefore, the sentences for anticausative and middles are similar, except that middles cannot be distinguished in terms of perfective and imperfective event interpretation because they denote generic statements. In Kiwoso, constructions which are regarded as dispositional middles appear only in the simple present tense in combination with the stative suffix *-ik-* and the habitual morpheme *-a*. Similarly to the event decomposition of causative, passive and anticausative of change of state verbs presented in figure 15, 16 and 17, respectively, the event structure of dispositional middles can be illustrated by an abstract structure, as in (346). Figure 18 is a schematic structure of (346).

Figure 18 illustrates that unlike causative, passive, and anticausative alternates, middle constructions are not affected by the perfective aspect, thus middle sentences of externally caused change of state verbs in Kiwoso are identical in terms of their aspectual properties. Unlike passive and anticausative constructions, middle sentence cannot be interpreted as denoting a process event or a result state. Middle sentences share one interpretation of being general statements. They do not present events as

ongoing or completed; rather events are presented as general and possible events. The generic meaning is conveyed by the habitual morpheme *-a-*, which is obligatory in any middle construction in Kiwoso. Similarly to perfective grammatical aspect in causative, anticausative, and passives, the habitual aspect form functional head in middle sentences, as (346) illustrates.

(346) [AspP_{hab} [VoiceP [Voice (-EA, AG) [vCaus [Root]]]]]

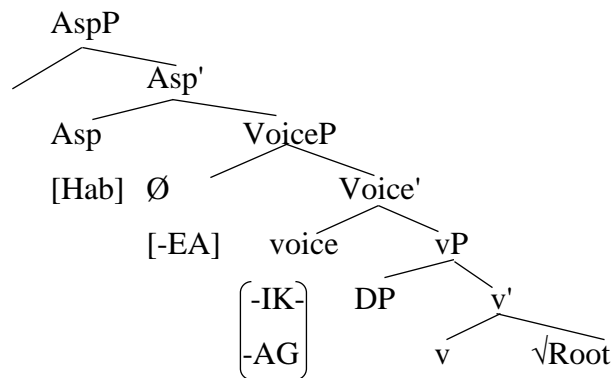


Figure 18: The decomposition of dispositional middle sentences in Kiwoso

The results of this study establish that passives stand out from anticausatives and middles in having agentive inferences. Middle is also distinctive in that it denotes generic statement, that is, the theme argument denotes a particular property in general. However, in Kiwoso, the three constructions are intransitives that involve expressed internal argument, but an implied external argument for passives and inexpressible ones in anticausatives and middles.

5.6 Change of state verbs and the aspectual verb classes

The Kiwoso change of state verbs discussed in section 5.3 and its subsections demonstrate that these verbs can be characterized in terms of aspectual verb classes. The discussion in chapter 3, section 3.7.5 and its subsections based on Smith (1997) demonstrates that verbs are categorized into different aspectual classes in relation to their temporal properties. The four major aspectual classes recognized by a number of scholars (see chapter 3 section 3.7) include Activity, Accomplishment, Achievement and State. These aspectual classes are exemplified in (347), illustrating the examples from Kiwoso.

- (347) a. *waka walekora kelya* *Activity*
wa-ka wa- le- kor- a kelya
 2-woman 2AGRs-PST- cook- FV 7food
 ‘Women cooked (some) food’

- b. *wandu walekunda muna* *State*
wa-ndu wa- le- kund- a mu-na
 2-person 2AGRs-PST- love- FV 1-child
 ‘People loved the child’
- c. *womi waletana mmba* *Accomplishment*
wo-mi wa- le- tan- a mmba
 2-man 2AGRs-PST- build- FV 9house
 ‘Men built the house’
- d. *wana waledeta kitabu* *Achievement*
wa-na wa- le- det- a kitabu
 2-child 2AGRs-PST- loss- FV 7book
 ‘Children lost the book’

The Kiwoso sentences in (347) demonstrate different aspectual classes which are distinguished in terms of temporal features of telicity, dynamism and duration. Basically, the Activity verb *kora* ‘cook’ in (347a) and the State verb *kunda* ‘love/like’ in (347b) are atelic. These verbs describe eventualities that involve unspecified duration. As its general characteristic, an Activity event terminates or stops, it never finishes. Indeed, sentence (347a) does not provide information about the temporal extent of the activity, but it deictically asserts that it is an event in the past which did terminate. Both Activity and State prescribe situations which are durative. However, whereas Activity instantiates dynamic events, State denotes static situations.

Accomplishments (347c) and Achievements (349d) denote telic and dynamic events. Unlike Activity and State verbs, events denoted by Accomplishment or Achievement verbs involve change of state and have natural endpoints. An Accomplishment verb such as *tana* ‘build’ in (347c) describes an event which include successive stages. For example, before having the house, one has to buy materials and engage in the actual work of building it. However, the process involved (the building of the house) and the outcome cannot be detached from each other. The relation between the process and the outcome of an Accomplishment event is known as non-detachability as Dowty (1967) puts it. On the other hand, Achievement verbs such as *deta* ‘loss’ in (347d) denotes events in which the preliminary stages are not considered part of the event. An Achievement event is true for the moment of its occurrence. Any process involved is conceptually detached from the event itself. This feature

sets an Achievement apart from an Accomplishment event in which the process and the event is non-detachable.

Sentences in (347) are instances of the major four aspectual verb classes at their basic levels. However, it has been evidenced that other sentence elements such as temporal adverbials and verbal complements affect event type. It has been established that in Kiwoso, temporal adverbial modifiers both durative and time-frame adverbials, and the nature of the DP object shift aspectual properties of the events. Indeed, time-frame adverbials shift an atelic event into a telic event, as demonstrated in (348).

- (348) a. *Anna nyalekora kelya* *Atelic: Activity*
Anna ni- a- le- kor- a kelya
 Anna INIT- AGRs- PST- cook- FV 7food
 ‘Anna cooked (some) food’
- b. *Anna nyalekora kelya nusu saa* *telic: Accomplishment*
Anna ni- a- le- kor- a kelya nusu saa
 Anna INIT- AGRs- PST- cook- FV 7food half hour
 ‘Anna cooked (some) food in half an hour’

Notice that when Activity verb appears with a telic adverbial *nusu saa* ‘in half an hour’ in Kiwoso, the sentence acquires bounded feature and, therefore, interpreted as an Accomplishment event, rather than Activity. Similarly, aspectual properties of a sentence may shift from one event type to another depending on the DP object. The results of the constructions examined demonstrate that a bare plural object such as *machunga* ‘oranges’ in (349b) shifts the interpretation of the telic event in (349a) into the atelic event, as evidenced in (349b).

- (349) a. *muna nyalelya ichunga* *telic: Accomplishment*
mu-na ni- a- le- ly- a i-chunga
 1-child INIT- 1AGRs-PST- eat- FV 5orange
 ‘The child ate an orange’
- b. *muna nyalelya machunga* *atelic: Activity*
mu-na ni- a- le- ly- a ma-chunga
 1-child INIT- 1AGRs-PST- eat- FV 6-orange
 ‘The child ate oranges’

Generally, aspectual value of the basic-level verb constellation is overridden by that of an adverbial and other relevant additional information, as examples in (348) and (349) illustrate (cf. Smith 1997). The sentences examined illustrate further that grammatical aspect such as perfective morpheme affects the interpretation of the aspectual verb classes in Kiwoso. It has been demonstrated that perfective aspect shifts an atelic process (i.e. activity) event into an Accomplishment result state. For example, sentence (350) without perfective aspect denotes an ongoing process event which is dynamic, whereas (350) is interpreted as a non-dynamic, that is, result state event. The effect of grammatical aspect in the interpretation of aspectual verb classes is evidenced in causative, anticausative, and passive sentences in combination with manner adjuncts and temporal modification, as exemplified in (350).

- (350) a. *wana walekora kelya (uwini)/(ko isaa)/(isaa)* (atelic/+dynamic)
wa-na wa- le- kora- a kelya (uwini)/(ko isaa)/(isaa)
 2-child 2AGRs-PST- cook- FV 7food (quickly)/(for hour)/(hour)
 ‘Children cooked food (quickly)/ (for an hour)/(in an hour)’
- b. *wana walemekora kelya (*uwini)/(*ko isaa)/(*isaa)* (telic/-dynamic)
*wa-na wa- le- me- kora- a kelya (*uwini)/(*ko isaa)/(*isaa)*
 2-child 2AGRs-PST- PERF- cook- FV 7food (*quickly)/(*for hour)/(hour)
 ‘Children had (already) cooked food (*quickly)/ (*for an hour)/(*in an hour)’

The change of state verbs examined in Kiwoso demonstrate that both causative and anticausative variants co-occur with durative as well as time-frame adverbials. The findings establish that causative constructions with a durative adverbial are interpreted as Activity events, but when these verbs appear with time frame adverbials they are conceived as denoting Accomplishment events. Temporal adverbials are exemplified in subsections 5.3.1.1.6, 5.3.2.3.5, 5.3.2.4.7 and 5.3.3.1.7.

- (351) *Leka nyalemanya n’ji (ko masaa abhi)/(masaa abhi)*
Leka ni- a- le- many- a n’ji (ko masaa abhi)/(masaa abhi)
 Leka INIT- AGRs- PST- cut- FV 3tree (for hours two)/(hours two)
 ‘Leka cut the tree (for two hours)/ (in two hours)’

- (352) *wana walekora kelya (ko masaa adadu)/(masaa adadu)*
wa-na wa- le- kor- a kelya (ko masaa adadu)/(masaa adadu)
 2-child 2AGRs-PST- cook- FV 7food (for three hours)/ (in three hours)
 ‘Children cooked food (for three hours)/ (in three hours)’

When sentences in (351) and (352) co-occur with time-frame adverbials their aspectual properties change from atelic Activity event into telic Accomplishment events. However, the durative adverbial modifiers do not alter the aspectual semantics of the sentences. Therefore, the sentence ‘*Leka cut the tree in two hours*’ denotes accomplishment event, whereas the sentence ‘*Leka cut the tree for two hours*’ involve unspecified period, therefore, interpreted as unbounded Activity event.

5.7 Summary

The example sentences discussed in this chapter demonstrate that externally and internally caused change of state verbs in Kiwoso widely alternate. According to the acceptability judgements offered by the native speakers of Kiwoso, these verbs widely participate in causative alternations. It has been established that Kiwoso change of state verbs exhibit different argument realization patterns depending on the conceptualization of eventualities. For example, verbs that denote human-driven activities such as *cook* and *cut* cannot realize natural forces as their external causer arguments, while *break* and *bend* verbs can license such arguments. The example sentences illustrate that externally and internally caused change of state verbs in Kiwoso differ in terms of external argument realization in that whereas the former require external intervention for the occurrence of eventualities, the latter denote natural events that are internally controlled.

With regard to external argument realizations, it has been established that verbs that describe non-human-driven activities, realize agent, instrument, as well as causers as their external arguments. However, verbs that denote eventualities that are human-oriented such as *cut* and *cook* can realize both agent and instrument but causers are unacceptable, as evidenced in 5.3.2.1.2 and 5.3.3.1.2. It has been established further that instrument argument as subjects are construed differently in Kiwoso. On the one hand, there are instruments conceptualized as inherently eventive, that is, they are involved in the event without being under the control of human agent (see example 208). This type of instruments is similar to causers by virtue of being independent in bringing about eventualities. On the other hand, there are instrument subjects which are understood to be permanently under the control of human agent. Sentences with such instrument subjects entail the presence of human agent in bringing about of the events denoted by the verb, as examples (233) and (257) evidence.

The analysis of the example sentences demonstrates that all three external arguments expressed in causative sentences appear as implicit arguments in passive constructions, and these arguments can be reintroduced via a prepositional *na*-phrase. However, anticausative constructions are compatible with agentive phrase, instrument, and causer modifications if they are introduced by *ko*-phrase, and interpreted as modifiers rather than arguments. It has been demonstrated that agent, instrument, and causers introduced by *ko*-phrase in Kiwoso are interpreted as modifiers of events rather than the participants in the events. Nevertheless, anticausative sentences of change of state verbs examined in this study involve a cause component. The causative semantics of anticausative sentences is justified by the compatibility of the causing event and the reason phrase/clause modifications in anticausative sentences.

Generally, given the characteristics of change of state verbs examined in this chapter, the syntactic decomposition approach, particularly the principles postulated by Alexiadou et al. (2006) and Alexiadou (2010) are confirmed in the analysis of these verbs in Kiwoso. This approach provides satisfactory account of argument alternations of change of state verbs in Kiwoso. It has been established that passive and anticausative differ from middle sentences in that middles have generic interpretation, and unlike passive and anticausatives, they lack specific time reference. Furthermore, unlike anticausative and passive sentences, the subject of any middle constructions is conceptualized as having specific characteristics that make the eventualities prescribed generic.

The results of the study demonstrate that there is a relationship between the alternations analyzed in this chapter, and the aspectual verb classes. It has been demonstrated that argument alternations, particularly the anticausative, involves a change in the aspectual properties of verb classes. Generally, Levin's (1993) semantic verb classes employed in this chapter have been fruitful in characterizing change of state verbs in Kiwoso. However, the semantic verb classes as characterized by Levin cannot be claimed to be accurate because change of state verbs examined in this study are not homogenous in terms of argument realization patterns as assumed to be by this author. According to the findings of this study, it can be argued that alternating change of state verbs are not consistent within or across languages. Alternation is basically constrained by encyclopedic information of individual verb roots, which is, however, language specific. Furthermore, non-linguistic factors such as knowledge of the world on how different occurrences are generally conceptualized determines the properties of verbs in relation to alternations.

CHAPTER 6

LOCATIVE-SUBJECT ALTERNATION CONSTRUCTIONS IN KIWOSO: MOTION VERBS, VERBS OF EXISTENCE, AND CHANGE OF STATE VERBS

6.1 Introduction

The previous chapter discussed the properties of change of state verbs in relation to argument realization and event semantics. In that chapter, properties of change of state verbs in Kiwoso have been characterized in relation to (anti-)causative, passive, and middle constructions. The present chapter explores the properties of motion verbs, verbs of existence, and change of state verbs in relation to locative-subject alternation. It is generally acknowledged that, similarly to change of state verbs, motion verbs, and verbs of existence, participate in anticausative alternation under the assumption that these verbs involve change of location/position (cf. Levin & Rappaport Hovav 1991; Schäfer 2008; Beavers et al. 2010). Therefore, motion verbs, verbs of existence and change of state verbs that occur in the locative-subject alternation in Kiwoso form the core concern of this chapter.

As was the case with the change of state verbs analyzed in chapter 5, the properties of motion verbs and verbs of existence are examined in relation to their occurrence in transitive and intransitive uses, and in conjunction with various modifications. Additionally, anticausative constructions are also examined in relation to aspectual verb class semantics in order to explore the relationship between the properties of verbs in anticausative constructions and the aspectual verb class semantics. The verbs examined in this chapter draw much from Levin's (1993) semantic verb classes. In the first part of the chapter, motion verbs, namely verbs of inherently directed motion (henceforth VIDMs) and manner of motion verbs are examined. In the second part of the chapter, verbs of existence including verbs of spatial configuration as a subset of existence verbs are analyzed. In addition, change of state verbs are also included in the analysis of locative-subject alternation sentences because, similarly to motion verbs and verbs of existence, change of state verbs seem to participate in this type of alternation.

This chapter in its entirety, therefore, consists of two major parts: part one discusses various constructions of motion verbs, verbs of existence, and change of state verbs taking into account different diagnostics, particularly the diagnostics for agentivity and event semantics. The acceptability judgements of these constructions as is also the case with the change of state verbs examined in chapter 5 were provided by introspection of the researcher, a native speaker, and several other native speakers of Kiwoso.

The first part is organized into several sections and subsections: section 6.2 explores verbs of VIDMs, and section 6.3 focuses on manner of motion verbs. Verbs of existence and spatial configuration are examined in sections 6.4 and 6.5, respectively. The last section explores sentences with change of state verbs in 6.6. Part two presents the discussion and analysis of the sentences offered in part one.

6.2 Verbs of inherently directed motion (VIDMs)

Levin (1993) characterizes VIDMs as motion verbs in which their meaning embeds specification of motion direction regardless of the presence of explicit directional complement. She maintains that depending on the verb itself, the specified direction of motion in the VIDMs can be either in deictic or nondeictic terms. This author asserts that VIDMs do not specify the manner of motion. She further argues that although members of this class have much in common, they nevertheless differ in some respects. For example she notes that VIDMs differ on how they express the goal, source, or path of motion. Levin points out that depending on the verb, the goal, source or path of motion may be syntactically expressed through a prepositional phrase, as a direct object, or both.

Members of VIDMs explored in this chapter include *ida* ‘enter’, *somuka* ‘exit’, *enda* ‘go’, and *shaama* ‘ascend’. However, the discussion and characterization of VIDMs in Kiwoso centers on the verb *ida* ‘enter’ and *shaama* ‘climb’. Any peculiar case from members of this class is identified and discussed, respectively. Notice that all members of VIDMs in Kiwoso examined in this chapter participate in locative-subject alternation. These verbs show two types of alternations: the variant with the subject argument with locative morphology (locative noun with suffix *-ni* and the prefix *ku-* in the subject-verb agreement) and the version with subject argument without locative morphology (locative nouns without suffix *-ni* or locative prefix *ku-* in the subject-verb agreement), respectively. Buell (2007) refers to the former type of locative alternate as formal locative and the latter type as semantic locative. Sentences with both forms are discussed in this chapter. It is important to point out from the onset that the two variants share similar interpretation, although it cannot be claimed to be identical. It should be noted that locative morphology in Kiwoso is exclusively indicated by the locative suffix *-ni*. Given the context, the suffix *-ni* in Kiwoso can denote all kinds of meaning indicated by the locative prefixes *ku-*, *pa-*, and *mu-*, the three traditionally locative noun class prefixes recognized for Bantu. (See also Mallya 2011 for details on locative expressions in Kiwoso and also chapter 2, section 2.5). The following subsections examine example sentences of VIDMs in combination with various modifications in establishing the properties of these verbs in terms of argument realization, causation and their aspectual properties.

6.2.1 Agent/theme argument as subject

- (353) a. *waka waleida duken*
wa-ka wa- le- id- a duke-n
 2-woman 2AGRs-PST- enter- FV 5shop-LOC
 ‘Women entered (into) the shop’
- b. *wanawaleshaama nlimen*
wa-na wa- le- shaam-a nlime-n
 2-child 2AGRs- PST- climb-FV 3mountain-LOC
 ‘Children climbed on/to the mountain’

The goal/source/location argument (with locative morphology) as subject

- (354) a. *duken kuleida waka*
duke- n ku- le- id- a wa-ka
 5shop-LOC 17- PST- enter- FV 2-woman
 ‘Into the shop entered women’
- b. *nlimen kuleshaama wana*
nlime- n ku-le-shaam-a wa-na
 3mountain- LOC 17-PST-climb-FV 2-child
 ‘On/to the mountain climbed children’

The goal/source/location argument (without locative morphology) as subject

- (355) a. *dukalyileida waka*
duka lyi- le- id- a wa-ka
 5shop 5AGRs-PST-enter- FV 2-woman
 ‘The shop (is the place where) women entered’
- b. *nlima uleshaama wana*
nlima u- le- shaam-a wa-na
 3mountain 6AGRs-PST- climb-FV 2-child
 ‘The mountain (is the place where) children climbed’

Examples in (354-355) are instances of locative-subject alternation in Kiwoso. The sentences in example (353) and those in (354-355) are similar in terms of propositional content but they are syntactically and discourse-pragmatically different. In (353), agent arguments occur in the preverbal subject position, while the locative DP occupies the postverbal position. That order is reversed, as evidenced in (354-355). Note that such transposition is also manifested in the agreement properties. It has been pointed out earlier in the introduction that Kiwoso shows two forms of alternations. The locative variant with subject argument with locative morphology, as observed in (354), and the alternate with subject argument without locative morphology, as (355) indicates. In examples (353), the preverbal DPs *waka* ‘women’ and *wana* ‘children’ are understood as agent arguments of the sentences, whereas the postverbal DPs *duken* ‘into shop’ and *nlimen* ‘on mountain’ are interpreted as locative (goal) complements. Conversely, in (354) and (355), the preverbal subject argument DPs with and without locative morphology, respectively, are goal arguments. As can be noted, in (354) the verbs agree with the locative prefix *ku-*, whereas in (355) the verbs agree with the nominal class prefixes of the respective nouns in the subject position. In other words, examples in (354) consist locative subject arguments with locative morphology, whereas (355) realize locative argument without locative morphology. Note that the locative-subject alternation constructions with subject argument with or without locative morphology, respectively, have a similar interpretation as pointed out earlier in this chapter.

6.2.2 The properties of goal/source/location argument in preverbal position

The sentences examined in Kiwoso indicate that the goal/source/location argument of the VIDMs constructions can comfortably occupy the subject position and pass various subjecthood diagnostics such as triggering subject-verb agreement, as evidenced in examples (354) and (355). This goal/source/location argument can also function as the subject of passive sentences, as well as appearing in the relative verb clauses, as examples in (356) and (357), respectively demonstrate.

The goal/source/location argument in passive verb constructions

- (356) a. *duken kuleido na waka*
duke-n ku- le- id- o na wa-ka
 5shop-LOC 17 -PST- enter- PASS by 2-woman
 ‘Into the shop was entered by women’

- b. *dukalyileido na waka*
duka lyi- le- id- o na wa-ka
 5shop 5AGRs-PST- enter- PASS by 2-woman
 ‘The shop was entered by women’

The goal/source/location argument in relative verb clauses

- (357) a. *duken kweeda wana kuudachaa*
duke-n ko- id- a wa-na ku- dach- a- a
 5shop-LOC 17- enter- FV 2-child 17- leak- FV PROG
 ‘Into the shop where children enter leaks/ (is leaking)’
- b. *dukalyeeda wana lyiidachaa*
duka lya- id- a wa-na lyi- dach-a- a
 5shop 5AGRs-enter-FV 2-child 9AGRs-leak-FV PROG
 ‘The shop where children enter leaks (is leaking)’

It has been established that locative-subject alternation constructions involve the reversal of grammatical relations in that, in these constructions, the locative occurs in the subject position, as evidenced in the agreement, passive verb, and relative verb clauses (see examples 356 and 357).

The locative subject prefix as expletive

The locative prefix *ku-* in Kiwoso has locative semantic content and, therefore, has subject argument interpretation rather than impersonal reading, as example (358) illustrates.

- (358) *kuleida waka (duken)*
ku- le- id- a wa-ka (duke-n)
 17- PST- enter- FV 2-woman (5shop-LOC)
 ‘There entered women (into the shop)’

Notice that in (358), the locative subject prefix *ku-* refers to the definite locations determined by the context. In Kiwoso, locative subject prefix *ku-*, is freely applicable to all VIDMs examined in this study, and it is understood as being associated with a locative argument denoting certain location/position.

6.2.3 The object status of the goal/location argument as subject

VIDMs constructions examined in relation to the locative-subject alternation in Kiwoso demonstrate that, like canonical object, the postverbal subject occupies object position and, like a typical subject, the goal/location subject argument exhibits subject-verb agreement, as evidenced in (354) and (355). However, the constructions examined indicate that the postverbal subject (agent/theme) of the VIDMs in Kiwoso lack properties typical of canonical objects. For example, the sentences examined demonstrate that agent/theme argument cannot be used in passive verb clauses or be associated with an object agreement prefix, as examples in (359b) and (360), respectively demonstrate.

- (359) a. *duken kuleido na waka*
duke-n ku- le- id- o na wa-ka
 5shop-LOC 17 -PST- enter- PASS by 2-woman
 ‘Into the shop was entered by women’
- b. **waka waleido duken*
wa-ka wa- le- id- o duke- n
 2-woman 2AGRs-PST- enter- PASS 5shop-LOC
 ‘*Women were entered into the shop’
- (360) **duken kulewaida waka*
duke-n ku- le- wa- id- a wa-ka
 5shop-LOC 17- PST- AGRo-enter- FV 2-woman
 ‘*Into the shop were entered them women’

Considering the objecthood diagnostics (passive verb constructions and object agreement prefix) employed in the above examples, it can thus be concluded that the postverbal agent/theme argument lack object properties, despite occupying the position typical for object relation. Similar results have been reported in several other Bantu languages such as Chichewa (Bresnan 1994; Bresnan & Kanerva 1989), Sesotho (Demuth 1990; Machobane 1995), Zulu (Buell 2007; Zeller 2013), Kikongo (Fernando 2013, 2015), to mention but a few.

6.2.4 Agent/theme argument and goal/location argument as subject with other modifications

As is the case with the change of state verbs discussed in chapter 5, the locative-subject alternation of VIDMs in Kiwoso are examined in combination with various diagnostics as discussed in the following subsections.

6.2.4.1 Agent-oriented adverbial modification

- (361) a. *waka waleida duken(kirango)*
 wa-ka wa- le- id- a duke-n (kirango)
 2-woman 2AGRs-PST-enter- FV 5shop-LOC (with clever)
 ‘Women entered into the shop(cleverly)’
- b. *duken kuleida waka (kirango)*
 duke- n ku- le- id- a wa-ka (kirango)
 5shop-LOC 17- PST- enter- FV 2-woman (with clever)
 ‘Into the shop entered women (cleverly)’
- c. *dukalyileida waka (kirango)*
 duka lyi- le- id- a wa-ka (kirango)
 5shop 5AGRs-PST- enter- FV 2-woman (with clever)
 ‘The shop (is the place where) women entered (cleverly)’

The sentences in (361) exemplify that agent-oriented adverbial *kirango* ‘cleverly’ in Kiwoso is compatible with a sentence with an agent/theme argument as subject as well as sentences with a goal/location argument with subject argument with and without locative morphology, respectively. However, it should be noted that such an adverbial modifies an agent argument *waka* ‘women’ in (361a) but in (361b) and (361c), it modifies the event with the interpretation that ‘the event of entering the shop was a clever event’. The sentences examined indicate that agentive adverbial cannot modify the goal/location argument in Kiwoso. Therefore, such modification is only accessible by the agent/theme subject argument, as in (361a) and by the event as a whole, as in (361b) and (361c).

6.2.4.2 Purpose clause modification

- (362) a. *waka waleida duken(kusudi waure sukari)*
 waka wa- le- id- a duken (kusudi waure sukari)
 2-woman 2AGRs-PST- enter- FV 5shop-LOC (so that they buy sugar)
 ‘Women entered into the shop(so that they buy sugar)’
- b. *duken kuleida waka (kusudi waure sukari)*
 duke- n ku-le- id- a wa-ka (kusudi waure sukari)
 5shop-LOC 17-PST-enter-FV 2-woman (so that they buy sugar)
 ‘Into the shop entered women (so that they buy sugar)’

- c. *dukalyileida waka (kusudi waure sukari)*
duka lyi- le- id- a wa-ka (kusudi waure sukari)
 5shop 5AGRs-PST- enter- FV 2-woman (so that they buy sugar)
 ‘The shop (is the place where) women entered(so that they buy sugar)’

Similarly to agent-oriented adverbial modification examined in the previous examples, VIDMs constructions in Kiwoso with agent argument as subject as well as the goal/location argument as subject can co-occur with purpose clause. Like agentive adverbial, the purpose clause modifies the agent/theme *waka* ‘women’ in (362a) and the event denoted by the verb in (362b) and (362c). Purpose clauses lack reference to the goal/location argument in Kiwoso. This is an indication that the goal/location subject lacks control into purpose clauses as well as access to volitional adverbials, as observed in section 6.2.4.2.

6.2.4.3 Reason phrase/clause modification

The locative-subject alternations of the VIDMs in Kiwoso examined in relation to an agent/theme subject argument, and the goal/location subject argument with and without locative morphology, respectively indicate that all forms are compatible with a reason phrase, as (363) illustrates.

- (363) a. *waka waleida duken(ko sababu ya mbyoo)*
wa-ka wa- le- id-a duke- n (ko sababu ya mbyoo)
 2-woman 2AGRs-PST-enter-FV 5shop-LOC (because of coldness)
 ‘Women entered into the shop (because of coldness)’
- b. *duken kuleida waka (ko sababu ya mbyoo)*
duke-n ku- le- id- a wa-ka (ko sababu ya mbyoo)
 5shop-LOC 17- PST- enter- FV 2-woman (because of coldness)
 ‘Into the shop entered women (because of coldness)’
- c. *duka lyileida waka (ko sababu ya mbyoo)*
duka lyi- le- id- a wa-ka (ko sababu ya mbyoo)
 5shop 5AGRs-PST- enter-FV 2-woman (because of cold)
 ‘The shop (is the place where) women entered(because of coldness)’

6.2.4.4 Manner/Instrument adjunct modification

It has been shown in subsections 6.2.4.1 and 6.2.4.2 that an agentive adverbial and purpose clause in locative-subject alternation constructions of the VIDMs in Kiwoso modify the agent argument (in the canonical sentence constructions) and the event (in the alternate constructions), respectively. Similarly, modifiers such as instrument and manner adjunct presented in example (364a) modify the agent/theme subject argument, whereas in (364b-c), these modifiers refer to the event as a whole.

- (364) a. *waka waleida duken(ferefere)/(na baskeli)*
 wa-ka wa- le- id- a duke-n (fererefere)/(na baskeli)
 2-woman 2AGRs-PST- enter- FV 5shop-LOC (quickly)/ (by bicycle)
 ‘Women entered into the shop(quickly)/ (by means of a bicycle)’
- b. *duken kuleida waka (fererefere)/(na baskeli)*
 duke- n ku- le- id- a wa-ka (fererefere) (na baskeli)
 5shop-LOC 17- PST- enter- FV 2-woman (quickly)/ (by bicycle)
 ‘Into the shop entered women (quickly)/ (by means of a bicycle)’
- c. *dukalyileida waka (fererefere)/(na baskeli)*
 duka lyi- le- id- a wa-ka (fererefere)/(na baskeli)
 5shop 5AGRs-PST- enter- FV 2-woman (quickly)/ (by bicycle)
 ‘The shop (is the place where) women entered (quickly)/ (by means of a bicycle)’

6.2.4.5 Temporal phrase modification

VIDMs are also examined in relation to their compatibility with temporal adverbials. The verbs *ida* ‘enter’ and *somuka* ‘exit’ in Kiwoso denote Achievement events in their basic level categorization. These verbs denote a temporally bounded event, thus they are compatible with completive phrase, as exemplified in (365a). However, the fact that Achievement verbs denote instantaneous events, these verbs can only co-occur with short time span adverbials. Therefore, short time span adverbials such as *dakika* ‘in a minute’ is acceptable, as (365a) illustrates, but *masaa adadu* ‘in two hours’ would be unacceptable. It can be noticed that the sentences in (365a), (366a), and (367a) are infelicitous with a durative adverbial. However, verbs such as *enda* ‘go’ and *shaama* ‘descend’ have an Accomplishment event interpretation and can appear with both durative and completive adverbials in all sentences examined, as exemplified by the verb *shaama* in (365b), (366b) and (367b). Basically, Accomplishment verbs denote a telic event with a natural endpoint, but when they co-occur with durative adverbials they describe a temporally unbounded Activity event type.

- (365) a. *baka ileida duken(*ko dakika)/(dakika)*
*baka i- le- id-a duke- n (*ko dakika)/(dakika)*
 9cat 9AGRs-PST-enter-FV 5shop-LOC (*for minute)/ (minute)
 ‘The cat entered the shop(*for a minute)/ (in a minute)’
- b. *wanawaleshaama nlimen (ko siku isadu)/(siku isadu)*
wa-na wa- le- shaam-a nlime-n (ko siku isadu)/(siku isadu)
 2-child 2AGRs- PST- climb-FV 3mountain-LOC (for day three)/(day three)
 ‘Children climbed the mountain (for three days)/ (in three days)’
- (366) a. *duka lyileida baka (*ko dakika)/(dakika)*
*duka lyi- le- id- a baka (*ko dakika)/(dakika)*
 5shop 5AGRs-PST- enter- FV 9cat (*for minute)/ (minute)
 ‘The shop (is the place where) cat entered (*for a minute)/ (in a minute)’
- b. *nlima uleshaama wana (ko siku isadu)/(siku isadu)*
nlima u- le- shaam-a wa-na (ko siku isadu)/(siku isadu)
 3mountain 3AGRs-PST- climb-FV 2-child (for day three)/ (day three)
 ‘The mountain (is the place where) children climbed (for three days)/ (in three days)’
- (367) a. *duken kuleida baka(*ko dakika)/(dakika)*
*duke- n ku- le- id- a baka (*ko dakika)/(dakika)*
 5shop-LOC 17- PST- enter- FV 9cat (*for minute)/ (minute)
 ‘Into the shop entered the cat(*for a minute)/ (in a minute)’
- b. *nlimenkuleshaama wana (ko siku isadu)/(siku isadu)*
nlime- n ku- le- shaam-a wa-na (ko siku isadu)/(siku isadu)
 3mountain- LOC 17- PST- climb-FV 2-child (for day three)/ (day three)
 ‘On/to the mountain climbed children (for three days)/ (in three days)’

Generally, directed motion verbs are typically telic in the sense that they denote events that constitute endpoints and license inferences about the final state (which is the goal of motion) of the moving or the moved entity. However, other factors such as temporal adverbials override the basic aspectual type of these verbs, and hence alter the aspectual interpretation, as examples in (365-367) illuminate (see chapter 3 section 3.7.5).

6.1.4.6 Causing event modification

Examples in (55) illustrate that VIDMs constructions can be modified by the causing event clauses. The sentence with an agent/theme argument as subject as well as the sentences with goal/location subject argument are all compatible with causing event modification. This is an indication that similar to the verbs of change of states discussed in chapter 5, VIDMs in Kiwoso involve a cause component, and hence do alternate.

- (368) a. *waka waleida duken(kweedoota nlango)*
 wa-ka *wa-* *le-* *id-* *a* *duke-n* (*kweedoota nlango*)
 2-woman 2AGRs-PST- enter- FV 5shop-LOC (by breaking door)
 ‘Women entered into the shop(by breaking the door)’
- b. *duken kuleida waka (kweedoota nlango)*
 duke-n *ku-* *le-* *id-* *a* *wa-ka* (*kweedoota nlango*)
 5shop-LOC 17- PST- enter- FV 2-woman (by breaking door)
 ‘Into the shop entered women (by/through breaking the door)’
- c. *dukalyileida waka (kweedoota nlango)*
 duka lyi- *le-* *id-* *a* *wa-ka* (*kweedoota nlango*)
 5shop 9AGRs-PST- enter- FV 2-woman (by breaking door)
 ‘The shop (is the place where) women entered(by/through breaking the door)’

6.2.5 Applicative-locative constructions

All VIDMs examined in combination with applicative suffix in Kiwoso demonstrate that members of this class cannot co-occur with an applicative morpheme, as the unacceptability of the sentences in (369a-c) indicate.

- (369) a. **waka waleidia duken*
 waka *wa-* *le-* *id-* *i-* *a* *duke-n*
 2-woman 2AGRs-PST- enter- APPL- FV 5shop-LOC
 ‘*Women entered by/through into the shop’
- b. **duken kuleidia waka*
 duke- *n* *ku-* *le-* *id-* *i* *a* *wa-ka*
 5shop-LOC 17- PST- enter- APPL FV 2-woman
 ‘*Into the shop were entered through by women’
- c. **dukalyileidia waka*
 duka *lyi-* *le-* *id-* *i-* *a* *wa-ka*
 5shop 5AGRs-PST-enter- APPL FV 2-woman
 ‘*The shop (is the place where) were entered by/through women’

It can be noticed that the applicative morpheme in (369a) renders VIDMs sentences ungrammatical. Likewise, sentences in (369b) with a goal/location argument as subject with locative morphology, and (369c) without locative morphology are also ungrammatical with applicative suffix. Basically, when the applicative suffix in Kiwoso co-occur with motion verbs it denotes the direction or path/goal of motion. Therefore, due to the fact that VIDMs contain a direction meaning inherent in its lexical semantic content, they cannot take an applicative morpheme. This is because when applicative suffix occurs with the verbs of change of location/position in locative-subject alternation constructions it specifies the direction or goal of motion, the property which is inherent to the lexical semantics of verbs of inherently directed motion.

In summary, this section examined locative-subject alternations of the VIDMs in Kiwoso in relation to various diagnostics for determining their aspectual verb class (situation type). It has been established that all members of this class exhibit locative-subject (causative-anticausative) alternation. VIDMs in Kiwoso indicate two types of alternations: the variant with subject argument without locative morphology on the goal/source argument, and another form with subject argument with locative morphology. The verbs of sentences with a goal/location argument as subject without locative morphology take the subject agreement of the nominal prefix of the respective noun, whereas for the variant with subject argument with locative morphology, the subject-verb agreement is with the locative prefix *ku-*. However, the two forms do not differ in terms of their general interpretations, but they are not identical in that the location is more prominent with the sentences with subject argument

with locative morphology which is not the case with the variant with subject argument without locative morphology. However, in terms of discourse-pragmatic function, the two alternates denote presentational focus of the predicated referent (cf. Bresnan & Kanerva 1989). The constructions of VIDMs examined also demonstrate that the goal/location subject argument exhibits properties of the canonical subject, as exemplified in (354-357). The constructions examined, however, indicate that the postverbal DPs lack object properties, as illustrated in subsection 6.2.3. Generally, all diagnostics employed in all constructions show compatibility with all sentences with agent/theme argument as subject and also with sentences involving a goal/location argument as subject. The constructions examined demonstrate that VIDMs in Kiwoso cannot co-occur with an applicative morpheme because their lexical-semantics involve path or direction meaning, thus they are infelicitous with an applicative morpheme, as shown in 6.2.5. Table 27 summarizes properties of VIDMS with various diagnostics in Kiwoso.

VIDMs in Kiwoso	Subj-Loc alter				Properties of VIDMs in locative-subject alternation																											
					Subj.properties of goal/location					Obj.prop erties of agent/th em		Age nt- Adv		By- phra se		Purp ose		Reas on		Caus ing		Man ner		Instr ume nt		Temporal						Appl
	Agent-subj	Theme-subj	DP ₊ loc	DP ₋ loc	S-V Agr	Subj-passiv	Passive-V	Relative-V	Expletive	Object-Agr	Subj-passiv	DP ₊ loc	DP ₋ loc	DP ₊ loc	DP ₋ loc	DP ₊ loc	DP ₋ loc	DP ₊ loc	DP ₋ loc	DP ₊ loc	DP ₋ loc	DP ₊ loc	DP ₋ loc	DP ₋		DP ₊ loc		DP ₋ loc		DP ₊ loc	DP ₋ loc	
																								F	I	F	I	F	I			
<i>ida</i>	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	✓	*	✓	*	*	*	*
<i>enda</i>	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*
<i>shaama</i>	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*
<i>somuka</i>	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	✓	*	✓	*	✓	*	*

Table 27: Properties of inherently directed motion verbs with various modifiers in Kiwoso

6.3 Manner of motion verbs

Levin (1993) asserts that manner of motion verbs describe motion which may or may not involve displacement. She argues that members of this category do not specify the direction of the motion they describe. Levin maintains that members of this class are similar in that they all involve manner or means semantic nuances, although they differ in terms of specificity in the expression of manner or means of motion they signify.

This section is devoted to the examination of manner of motion verbs in Kiwoso. Four members of this category are examined in relation to their participation in locative-subject alternation. These are: *dicha* ‘run’, *tola* ‘jump’, *birimika* ‘roll’ and *fina* ‘dance’. Because it is impractical to examine and discuss each member separately, characterization of manner of motion verbs in Kiwoso centers on the verb *tola* ‘jump’ as a representative sample of the class. Any peculiar cases arising are pointed out and characterized accordingly.

In a similar fashion to the VIDMs discussed in section 6.1, all manner of motion verbs examined in this section participate in locative-subject alternation, and exhibit two types of alternations as well. These verbs occur in the causative-anticausative alternation with subject argument with locative morphology on the goal/source/location argument, and also with subject argument goal/source/location not taking locative morphology. The two alternates are morphosyntactically different, but semantically they have a similar interpretation. The anticausative alternation without the subject goal/source/location argument having locative morphology involves bare nouns and the subject agreement is between the respective noun prefix, as in (372). By contrast, the causative variant with subject argument with locative morphology involves the locative prefix *ku-* which appears in the agreement and the goal/source/location noun is necessarily suffixed with the locative suffix *-ni*, as evidenced in (371).

6.3.1 Agent/theme argument as subject

(370) *wana waletola ukuta*

<i>wa-na</i>	<i>wa-</i>	<i>le-</i>	<i>tol-</i>	<i>a</i>	<i>ukuta</i>
2-child	2AGRs-PST-jump-	FV	11fence		
‘The children jumped (over) the fence’					

The goal/source/location argument (with locative morphology) as subject(371) *ukuten kuletola wana*

ukute- n ku- le- tol- a wa-na
 11fence-LOC 17- PST- jump- FV 2-child
 ‘Over the fence jumped children’

The goal/source/location argument (without locative morphology) as subject(372) *ukuta luletola wana*

ukuta lu- le- tol- a wa-na
 11fence 11AGRs-PST-jump- FV 2-child
 ‘The fence (is the place where) children jumped’

6.3.2 The subjecthood of the goal/source/location argument

Similarly to the VIDMs previously examined, the constructions of manner of motion verbs examined in Kiwoso indicate that the goal/location arguments as subject show properties of canonical subject. The goal/location argument exhibits agreement to the verb, as exemplified in (371-372), and can appear as the subject of passive sentences, as (373) illustrates, as well as in relative clauses, as shown in (374). In fact, it has become a standard assumption that the preverbal locative subject DPs in Bantu locative inversion constructions is actually the grammatical subjects (cf. Bresnan & Kanerva, 1989; Bresnan, 1994; Zeller, 2013). The sentences analyzed in Kiwoso support such an assumption as well.

The goal/source/location argument in passive verb constructions(373) a. *ukuten kuletolo*

ukute- n ku- le- tol- o
 11fence-LOC 17- PST- jump- PASS
 ‘Over the fence was jumped’

b. *ukuta luletolo*

ukuta lu- le- tol- o
 11fence 11AGRs-PST-jump- PASS
 ‘The fence (is the place where) (someone) jumped’

Notice that both goal/location argument with and without locative morphology, respectively can function as the subject of passive sentence, as shown in (373). Note that, similarly to the active counterparts (see examples 371 and 372), the alternation in passive forms have similar interpretation, as (60a) and (60b) demonstrate.

The goal/source/location argument in relative clauses

- (374) a. *ukuten kuletola wana kuleasuka*
ukute- n ku- le- tol- a wana ku- le-
asuk- a
 11fence-loc 17- PST- jump- FV 2-child 17- PST-
 crack- FV
 ‘Over the fence where the children jumped cracked’
- b. *ukuta luletola wana lodooka*
ukuta lu- le- tol- a wa-na lo- dook- a
 11fence 11AGRs-PST-jump- FV 2-child 11- collapse-FV
 ‘The fence which children jumped collapses’

The locative prefix as expletive

Similar to locative-subject constructions of VIDMs, manner of motion verbs involve the locative prefix *ku-* which functions as a subject agreement prefix in a similar fashion the goal/location argument does. This prefix cannot be interpreted as expletive, and it lacks impersonal reading. The prefix has a locative subject semantic content, thus it is associated with (an implicit) locative pronominal subject, as example (375) indicates.

- (375) *kuletolawana (ukuten)*
ku- le- tol- a wa-na (ukute- n)
 17- PST- jump- FV 2-child (11fence-LOC)
 ‘There jumped children (over the fence)’

Notice that the prefix *ku-* in (375) is associated with an implicit locative subject that denotes a location which is contextually determined and inferred from the shared interaction of interlocutors.

6.3.3 The objecthood of the postverbal agent/theme argument

The manner of motion verbs examined in relation to locative-subject alternations indicate that subject occupies the postverbal position as is also the case with the postverbal subject of the VIDMs discussed in section 6.2. Canonically, this is a position for object grammatical relation. However, despite its occurrence in this position, the postverbal DPs of manner of motion verbs in Kiwoso do not exhibit object properties. The sentences examined indicate that the postverbal subject cannot passivize or co-occur with an object agreement prefix, as the ungrammaticality of the constructions in (376a) and (376b-c), respectively indicate.

- (376) a. **wana waletolo ukuta*
 wa-na *wa-* *le-* *tol-* *o* *ukuta*
 2-child 2AGRs-PST- jump- PASS 11fence
 ‘*Children were jumped the fence’
- b. **ukuten kulewatola wana*
 ukute- *n* *ku-* *le-* *wa-* *tol-* *a* *wa-na*
 11fence-LOC 17- PST- AGRo-jump- FV 2-child
 ‘*Over the fence were jumped them the children’
- c. **ukuta lulewatola wana*
 ukuta *lu-* *le-* *wa-* *tol-* *a* *wa-na*
 11fence 11AGRs-PST- AGRo-jump- FV 2-child
 ‘*The fence is the place where them the children jumped’

6.3.4 Agent/theme argument and goal/location argument as subject with other types of modifications

6.3.4.1 Agent-oriented adverbial modification

- (377) a. *wana waletola ukuta(kirango)*
 wa-na *wa-* *le-* *tol-* *a* *ukuta* *(kirango)*
 2-child 2AGRs-PST- jump- FV 11fence (with clever)
 ‘Children jumped the fence (cleverly)’

- b. *ukuten kuletola wana (kirango)*
ukute- n ku- le- tol- a wa-na (kirango)
 11fence-LOC 17- PST- jump- FV 2-child (with clever)
 ‘Over the fence jumped children (cleverly)’
- c. *ukuta luletola wana (kirango)*
ukuta lu- le- tol- a wa-na (kirango)
 11fence 11AGRs-PST-jump- FV 2-child (with clever)
 ‘The fence (is the place where) children jumped (cleverly)’

Sentences in (377) demonstrate that similarly to VIDMs, manner of motion verbs in Kiwoso accept agent-oriented adverbial modification. Notice that in a similar fashion with the VIDMs, agentive adverbial *kirango* ‘cleverly’ in example (377a) modifies the agent/theme argument *wana* ‘children’, whereas in (377b) and (377c), such a phrase modifies the entire event of ‘jumping’ rather than the participants (arguments) of the event.

6.3.4.2 Purpose clause modification

It has been pointed out previously that purpose phrases/clauses similarly to agentive adverbial modify volitional arguments. The constructions in (378) indicate that manner of motion verbs in locative-subject alternation sentences can co-occur with a purpose phrase but such a phrase modifies the agent/theme argument *wana* ‘children’ in example (378a) where the agent/theme is the subject. However, in (378b) and (378c) sentences, such modification refers to the event as a whole.

- (378) a. *wana waletola ukuta(kusudi watoroke)*
wa-na wa- le- tol- a ukuta (kusudi watoroke)
 2-child 2AGRs-PST- jump- FV 11fence (so that they escape)
 ‘Children jumped the fence (so that they escape)’
- b. *ukuten kuletola wana (kusudi watoroke)*
ukute- n ku- le- tol- a wa-na (kusudi watoroke)
 11fence-LOC 17- PST- jump- FV 2-child (so that they escape)
 ‘Over the fence jumped children (so that they escape)’

- c. *ukuta luletola wana (kusudi watoroke)*
ukuta lu- le- tol- a wa-na (kusudi watoroke)
 11fence 11AGRs-PST-jump- FV 2-child (so that they escape)
 ‘The fence (is the place where) children jumped (so that they escape)’

6.3.4.3 Reason phrase/clause modification

As is the case with the constructions of VIDMs in Kiwoso, sentences with manner of motion verbs analyzed in this section demonstrate that the sentence with agent/theme subject argument as well as the sentences with goal/location subject argument with and without locative morphology, respectively are felicitous with reason phrase/clause modification. The reason phrase *ko sababu ya mudo* ‘because of fire’ in (379b-c) sentences modifies *the jumping event*, and not the participants of the event. Such a phrase offers causal explanation of why the event happened, whereas in (379a), it provides reason as to why participants, in this case, agent/theme argument *wana* ‘children’ perform the denoted event.

- (379) a. *wana waletola ukuta(ko sababu ya mudo)*
wa-na wa- le- tol- a ukuta(ko sababu ya mudo)
 2-child 2AGRs-PST- jump- FV 11fence (because of 9fire)
 ‘The children jumped the fence (because of fire)’
- b. *ukuten kuletola wana (ko sababu ya mudo)*
ukute- n ku- le- tol- a wa-na (ko sababu ya mudo)
 11fence-LOC 17- PST- jump- FV 2-child (because of 9fire)
 ‘Over the fence jumped children (because of fire)’
- c. *ukuta luletola wana (ko sababu ya mudo)*
ukuta lu- le- tol- a wa-na (ko sababu ya mudo)
 11fence 11AGRs-PST-jump- FV 2-child (because of 9fire)
 ‘The fence (is the place where) children jumped (because of fire)’

6.3.4.4 Temporal phrase modification

Manner of motion verbs are also examined in relation to aspectual properties. Basically, all manner of motion verbs analyzed in this study denote atelic Activity events. Activity verbs are compatible with both durative and completive temporal modifiers, however, with different aspectual interpretations. It has been pointed out that adverbial aspectual property overrides the

basic aspectual class of verbs (cf. Smith, 1997). There is a strong evidence that the same holds in Kiwoso change of state and motion verbs constructions. The findings of this study demonstrate that telic adverbials such as *dakika tanu* ‘in five minutes’ shift the aspectual property of motion verbs from an atelic (Activity) event into a telic (Accomplishment) event. However, atelic durative adverbials like *ko dakika tanu* ‘for five minutes’ does not alter the aspectual type of these verbs, but rather bounds the event time without entailing the culmination of the event itself. Generally, manner of motion verbs in combination with telic modifiers denote events with a logical culmination. However, when these verbs appear with atelic adverbials, the aspectual property is maintained as both verbs and modifiers share similar aspectual features.

- (380) a. *wana waletola ukuta (ko dakika tanu)/(dakika tanu)*
wa-na wa- le- tol- a ukuta (ko dakika tanu)/(dakika tanu)
 2-child 2AGRs-PST- jump- FV 11fence (for minute five)/(minute five)
 ‘The children jumped the fence (for five minutes)/ (in five minutes)’
- b. *ukuten kuletola wana (ko dakika)/(dakika)*
ukute- n ku- le- tol- a wa-na (ko dakika)/(dakika)
 11fence-LOC 17- PST- jump- FV 2-child (for minute)/(minute)
 ‘Over the fence (is the place where) jumped children (for a minute)/ (ina minute)’
- c. *ukuta luletola wana (ko dakika)/(dakika)*
ukuta lu- le- tol- a wa-na (ko dakika)/(dakika)
 11fence 11AGRs-PST-jump- FV 2-child (for minute)/ (minute)
 ‘The fence (is the place where) jumped children (for a minute)/ (ina minute)’

6.3.4.5 Manner/Instrument/ adjunct modification

In Kiwoso, all manner of motion verbs examined in relation to locative-subject alternations suggest that instrument and manner adjuncts can occur as possible modifiers in these constructions. The instrument *na ngasi* ‘by a ladder’ in (381a) denotes the instrument used by agent/theme argument to carry out the event, while in (381b-c) the instrument is interpreted as

a means which facilitates the occurrence of the event. On the other hand, the adjunct *ferefere* ‘quickly’ in (381a) describes how agent argument performs the event, while in (381b-c) it denotes the manner of how the event occurred.

- (381) a. *wana waletola ukuta(ferefere)/(na ngasi)*
wa-na wa- le- tol- a ukuta (ferefere)/(nangasi)
 2-child 2AGRs-PST- jump- FV 11fence (quickly)/(byladder)
 ‘Children jumped the fence (quickly)/ (by means of a ladder)’
- b. *ukuten kuletola wana (ferefere)/(na ngasi)*
ukute- n ku- le- tol- a wa-na(ferefere)/(na ngasi)
 11fence-LOC 17- PST- jump- FV 2-child (quickly)/ (by ladder)
 ‘Over the fence jumped children (quickly)/ (by means of a ladder)’
- c. *ukuta luletola wana (ferefere)/(na ngasi)*
ukuta lu- le- tol- a wa-na (ferefere)/(na ngasi)
 11fence 11AGRs-PST-jump- FV 2-child (quickly)/ (by ladder)
 ‘The fence (is the place where) children jumped (quickly)/ (by means of a ladder)’

6.3.4.6 Causing event modification

The locative-subject alternation sentences of manner of motion verbs examined in combination with the causing event modification show that all members of this category are compatible with causing event modifiers, as evidenced in (382). Similarly to the VIDMs examined in section 6.2, and the (anti-)causative alternation examined in chapter 5, the acceptability of causing event modifier in the locative-subject alternation verb sentences of manner of motion verbs reflects the presence of a cause component which is inherent in the lexical semantics of these verbs.

- (382) a. *wana waletola ukuta(kweekuwajya ngasi)*
wa-na wa- le- tol- a ukuta (ko i- ku- waj- i-
a ngasi)
 2-child 2AGRs-PST- jump- FV 11fence (by INF- REC- hold-
 APPL-FV 9ladder)
 ‘Children jumped the fence (by holding the ladder for each other)’

- b. *ukuten kuletola wana (kweekuwajya ngasi)*
ukute-n ku- le- tol- a wa-na (ko i- ku-waj-i-a ngasi)
 11fence-LOC 17- PST- jump- FV 2-child ((by INF- REC-hold- APPL- FV 9ladder)
 ‘Over the fence jumped children (byholding the ladder for each other)’
- c. *ukuta luletola wana (kweekuwajya ngasi)*
ukuta lu- le- tol- a wa-na (ko i- ku-waj-i-a ngasi)
 11fence 11AGRs-PST-jump- FV 2-child (by INF- REC-hold- APPL- FV 9ladder)
 The fence (is the place where)children jumped (byholding the ladder for each other)

6.3.5 The applicative-locative constructions

Unlike VIDMs discussed in section 6.2, all manner of motion verbs analyzed in this section can take the applicative suffix. It can be noted that the sentence with an agent/theme argument as subject in (383a), as well as the sentence with location argument as subject without locative morphology in (383b), and the subject argument with locative morphology in (383c) are all licit with the applicative suffix *-i*. The applicative morpheme in a sentence with agent/theme subject argument, and in the sentences with a goal/location subject argument indicates exclusive location/position as well as the direction of motion. In all manner of motion verbs examined in this study, the applicative suffix induces the direction and goal of motion, as the sentences in (383a-c) exemplify. The co-occurrence of applicative morpheme with manner of motion verbs alters the basic aspectual interpretation of these verbs from an atelic event (Activity) into a telic Accomplishment event.

- (383) a. *wana waletolia ukuta*
wa-na wa- le- tol- i- a ukuta
 2-child 2AGRs- PST- jump- APPL- FV 11fence
 ‘Children jumped (to)/ (exclusively to) the fence’

b. *ukuten kuletolia wana*

ukute- n ku- le- tol- i a wa-na

11fence-LOC 17- PST- jump- APPL-FV 2-child

‘Over the fence (exclusively) jumped children/to the fence jumped children’

c. *ukuta luletolia wana*

ukuta lu- le- tol- i- a wa-na

11fence 11AGRs-PST-jump-APPL FV 2-child

‘The fence (is the exclusive place) where children jumped/ to the fence jumped children’

This section discussed verbs of manner of motion in relation to locative-subject alternations. It has been demonstrated that all manner of motion verbs examined participate in the locative-subject (causative-anticausative) alternation. Also, similarly to VIDMs discussed in section 6.2, manner of motion verbs realize two types of alternations: the alternate with subject argument with locative morphology, as example (371) demonstrates, and the other alternate with subject argument without locative morphology, as (372) exemplifies. In terms of interpretations, both variants with the subject argument with and without locative morphology, respectively are semantically similar but not identical. The sentences also illustrate that goal/location subject argument in the constructions of motion verbs show typical subject properties, as evidenced in the agreement patterns in examples (371-372), and in passive and relative clause constructions, as examples in (373) and (374), respectively illustrate. However, the postverbal DP fails all objecthood diagnostics, as shown in section 6.3.3. The constructions examined indicate that manner of motion verbs similarly to VIDMs are compatible with various modifications. Unlike VIDMs, manner of motion verbs take the applicative suffix. This suffix specifies the location as well as denoting the direction or the goal of motion, as shown in 6.3.5. Table 28 summarizes the properties of manner of motion verbs with various diagnostics.

Manner of motion verbs in Kiwoso	Subj-Loc alternation				Properties of manner of motion verbs in locative-subject alternation																											
					Subj.properties of goal/location				Obj.prop erties of agent/th em		Age nt- Adv		By- phra se		Purp ose		Reas on		Caus ing		Man ner		Instr ume nt		Temporal						Appl	
	Ag-subj	Theme-subj	DP ₊ loc	DP ₋ loc	S-V Agr	Subj-passiv	Passive-V	Relative-V	Expletive	Object-Agr	Subj-passiv	DP ₊ loc	DP ₋ loc	DP ₊ loc	DP ₋ loc	DP ₊ loc	DP ₋ loc	DP ₊ loc	DP ₋ loc	DP ₊ loc	DP ₋ loc	DP ₊ loc	DP ₋ loc	DP ₊ loc	DP ₋ loc	DP ₊ loc	DP ₋ loc	DP ₊ loc	DP ₋ loc	DP ₊ loc	DP ₋ loc	
<i>dicha</i>	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>tola</i>	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>finā</i>	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>birimika</i>	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Table 28: Properties of manner of motion verbs with different modifiers in Kiwoso

6.4 Verbs of existence

Levin (1993) characterizes verbs of existence as verbs that relate to the existence of some entity at some location. Generally, these verbs describe eventualities that necessarily involve two arguments: the theme, and the location arguments (cf Levin & Rappaport Hovav, 1995). In this section, Kiwoso verbs of existence, namely *kaa* ‘live in’, *baki* ‘remain’ and *bheda* ‘wait’ are examined in order to determine their characteristics in locative-subject alternation sentences. However, the discussion focuses on the verb *kaa* ‘live in/dwell/reside’ as a representative sample of the class, but irregular cases are also noted and discussed in the body of text. Similarly to motion verbs discussed in sections 6.2 and 6.3, verbs of existence exhibit two types of alternations, as examples (385) and (386) illustrate. However, there is no significant difference in terms of interpretations between the two variants.

6.3.1 An agent/theme argument as subject

(384) *fuko tikaa marinen*

<i>fuko</i>	<i>ti-</i>	<i>ka-</i>	<i>a</i>	<i>marine-n</i>
10moles	10AGRs-live-	FV		6hole-LOC
‘Moles live in the holes’				

The goal/source/location argument (withlocative morphology) as subject

(385) *marinen kukaa fuko*

<i>marine-n</i>	<i>ku-</i>	<i>ka-</i>	<i>a</i>	<i>fuko</i>
6holes-LOC	17-	live-	FV	10moles
‘In the holes live moles’				

It should be noted that the preverbal DP *fuko* ‘moles’ in 6.4.1 functions as a subject and has agent/theme argument thematic role, whereas the postverbal DP *marinen* ‘in the holes’ is a complement argument which has locative role interpretation. In the sentences in (385-386), the roles of preverbal DPs and the postverbal DPs reverse as the sentences indicate. Note that in example (385), the verb agrees with the locative prefix *ku-*, while in (386) the verb agrees with the nominal prefix of the respective noun. As argued earlier, the semantics of the two alternates are, however, similar.

The goal/source/location argument (without locative morphology) as subject

(386) *marina akaa fuko*

<i>marina</i>	<i>a-</i>	<i>ka-</i>	<i>a</i>	<i>fuko</i>
6holes	6AGRs-live-	FV	10males	

‘The holes (are the places where) moles live’

6.4.2 The status of goal/location argument as subject

Typical to canonical subjects, the goal/location subject argument with and without locative morphology, respectively triggers subject-verb agreement. The constructions of existence verbs examined indicate that sentences with goal/location subject argument cannot function as a subject of passive sentences, as (387) illustrates. However, the goal/location subject argument can function as the subject in the relative verb clauses, as exemplified in (388).

The goal/location argument in passive constructions

(387) a. **marinen kukao fuko*

<i>marine-n</i>	<i>ku-</i>	<i>ka-</i>	<i>o</i>	<i>fuko</i>
6holes-LOC	17-	live-	PASS	10moles

‘*In the holes were lived by moles’

b. **marina akao fuko*

<i>marina</i>	<i>a-</i>	<i>ka-</i>	<i>o</i>	<i>fuko</i>
6holes	6AGRs-live-	PASS	10moles	

‘*The holes (are the places where) were lived by the moles’

The goal/location argument in relative verb clauses

(388) a. *marinen kukaa fuko kuleeda mbefu*

<i>marine-n</i>	<i>ku-</i>	<i>ka-</i>	<i>a</i>	<i>fuko</i>	<i>ku-</i>	<i>le-</i>	<i>id-a</i>
<i>mbefu</i>							
6holes-LOC	17-	live-	FV	10moles	17-	PST-	enter-FV
10ants							

‘In the holes where moles live entered ants’

- b. *marina akaa fuko aleeda mbefu*
marina a- ka- a fuko a- le- id- a
mbefu
 6holes 6AGRs-live- FV 10moles 6AGRs-PST- enter- FV
 10ants
 ‘The holes where moles live entered ants’

Notice that similarly to prototypical subjects, goal/location subject argument with and without locative morphology, respectively demonstrate properties of subject relations, as subject diagnostics such as subject-verb agreement (see examples 385-386), and its occurrence in relative verb clause as (388) demonstrates.

The locative prefix as expletive

Verbs of existence examined in the locative-subject alternation constructions indicate that the locative prefix *ku-* is semantically significant as the pronominal agreement prefix of location. Such a prefix is pronominally used to denote a definite location which can be inferred from the context even when the location is not explicitly indicated. As argued in the previous sections, the Kiwoso locative prefix *ku-* lacks an impersonal (or existential) reading. Example (389) is illustrative of the locative prefix *ku-* as a subject pronominal locative prefix in Kiwoso.

- (389) *kukaa fuko (marinen)*
ku- ka- a fuko (marinen)
 17- live- FV 10moles (6holes-LOC)
 ‘There lives moles (in the holes)’

6.4.3 The status of agent/theme argument in postverbal position

The sentences with verbs of existence analyzed in the locative-subject alternation in Kiwoso show that the postverbal subject appears to occupy object position, but yet it does not exhibit object properties. In all constructions examined, the agent/theme argument in the alternation sentences cannot occur in the subject position of the corresponding passive construction, as (390a) illustrates, and also cannot be associated with the object agreement prefix, as the

ungrammaticality of sentence (390b) indicates. This is also the case with VIMDs and manner of motion verbs examined in sections 6.2 and 6.3, respectively.

- (390) a. **fuko tikao marinen*
 fuko *ti-* *ka-* *o* *marine-n*
 10moles 10AGRs-live- **PASS** 6hole-LOC
 ‘*The holes were lived by in the holes’
- b. **marinen kutikaa fuko*
 marine-n *ku-* *ti-* *ka-* *a* *fuko*
 6holes-LOC 17- AGRo-live- FV 10moles
 ‘*In the holes live them the moles’

6.4.4 The agent/theme and goal/location arguments with other modifiers

Verbs of existence are also analyzed in combination with various modifications in order to determine their behavior in terms of argument structure and their aspectual verb class properties. Various modifiers employed in the locative-subject alternation constructions of existence verbs are discussed in the next subsections.

6.4.4.1 Agent-oriented adverbial modification

- (391) a. *fuko tikaa marinen (kirango)*
 fuko *ti-* *ka-* *a* *marine-n* *(kirango)*
 10moles- 10AGRs-live- FV 6holes-LOC (with skill)
 ‘Moles live in the holes (cleverly)’
- b. *marinen kukaa fuko (kirango)*
 marine-n *ku-* *ka-* *a* *fuko* *(kirango)*
 6holes-LOC 17- live- FV 10moles (with skill)
 ‘In the holes live moles (cleverly)’
- c. *marina akaa fuko(kirango)*
 marina *a-* *ka-* *a* *fuko* *(kirango)*
 6holes 9AGRs-live- FV 10moles (with skill)
 ‘The holes (are the places where) moles live (cleverly)’

The sentences in (391) exemplify the compatibility of agent-oriented adverbials with the verbs of existence in Kiwoso. However, notice that like other verbs examined in sections 6.2 and 6.3, the agentive adverbial in (391a) modifies the manner the agent/theme argument performs the action denoted by the verb, whereas in (391b-c) the modification is oriented towards the entire event expressed in the clause.

6.4.4.2 Purpose clause modification

- (392) a. *fukotikaa marinen (kusudi tilawadwe)*
fuko ti- ka- a marine-n (kusudi ti- la-
wad- o- e)
 10moles 10AGRs-live- FV 6holes LOC (so that 10AGRs-NEG-
 catch-PASS-FV)
 ‘Moles live in the holes (so that they are not caught)’
- b. *marinen kukaa fuko (kusudi tilawadwe)*
marine-n ku- ka- a fuko (kusudi ti-la- wad- o-e)
 6holes-LOC 17- live- FV 10moles (so that 10AGRs-NEG-
 catch-PASS-FV)
 ‘In the holes live moles (so that they are not caught)’
- c. *marina akaa fuko(kusudi tilawadwe)*
marina a- ka- a fuko (kusudi ti- la-
wad- o- e)
 6holes 6AGRs-live- FV 10moles (so that 10AGRs-NEG-
 catch-PASS-FV)
 ‘The holes (are the places where) moles live (so that they are not caught)’

Similarly to the agentive adverbial modification examined in the previous section, verbs of existence allow purpose clause modifiers. As is the case with other verbs examined in this chapter, the purpose clause in sentences with a goal/location subject argument with or without locative morphology, respectively modifies the event, whereas in the sentences with agent/theme argument as subject, as in (392a), the clause modifies the agent/theme argument.

6.4.4.3 Reason clause modification

- (393) a. *fuko tika marinen (ko sababu ya mmbari)*
fuka ti- ka- a marine-n (ko sababu ya mmbari)
 10moles 10AGRs-live- FV 6holes-LOC (because of 9sunlight)
 ‘Moles live in the holes (because of sunlight)’
- b. *marinen kukaa fuko (ko sababu ya mmbari)*
marine-n- ku- ka- a fuko (ko sababu ya mmbari)
 6holes-LOC 17- live- FV 10moles (because of 9sunlight)
 ‘In the holes live moles (because of sunlight)’
- c. *marina akaa fuko (ko sababu ya mmbari)*
marina a- ka- a fuko (ko sababu ya mmbari)
 6holes 6AGRs-live- FV 10moles (because of sunlight)
 ‘The holes (are the places where)moles live (because of sunlight)’

Sentences in (393) demonstrate that the verb *kaa* ‘live/reside’ in Kiwoso can co-occur with reason phrase modification. Other verbs of existence examined for the purpose of this study also indicate that reason clauses/phrases are compatible with these verbs. Phrases such as *ko sababu ya mmbari* ‘because of sunlight’ in (393a) modifies the agent/theme argument, while the same phrase describes the event as a whole in sentences (393b-c).

6.4.4.4 Manner/Instrument/adjuncts modification

The results of the verbs of existence examined in Kiwoso indicate that whereas a manner adjunct can freely co-occur with all verbs, it is hard to find evidence of instrument adjunct modification for the verb such as *kaa* ‘live in’. However, other existence verbs in Kiwoso, for instance *baki* ‘stay/remain behind’ can appear with both manner and instrument adjuncts, as (394) demonstrates.

- (394) a. *waka walebaki duken (ko siri)/ (na risasi)*
waka wa- le- baki duke- n (ko siri)/ (na risasi)
 2-woman 2AGRs-PST- remain 5shop-LOC (with secret)/ (by 9gun)
 ‘Women remained at the shop (secretly)/ (by means of a gun)’

- b. *duken kulebaki waka (ko siri)/(na risasi)*
duke-n- ku- le- baki wa- ka (ko siri)/(na risasi)
 5shop-LOC 17- PST- remain 2-woman (with secret)/ (by 9gun)
 ‘At the shop remained women (secretly)/ (by means of a gun)’
- c. *duka lyilebaki waka (ko siri)/(na risasi)*
duka- lyi- le- baki wa-ka (ko siri)/(na risasi)
 5shop 5AGRs-PST- remain 2-woman (with secret)/ (by 9gun)
 ‘The shop (is the place where) women remained (secretly)/ (by means of a gun)’

As is shown with other verbs discussed in this section, when manner and instrument adjuncts occur with the sentences with a goal/location argument as subject with or without locative morphology, respectively, as in (394b-c), the modifications describe the event as a whole. By contrast, when these modifiers appear in sentences with an agent/theme subject argument, as in (394a), instrument and manner adjuncts modify specifically the agent/theme argument.

6.4.4.5 Temporal adverbials

The verbs of existence examined in Kiwoso show different characteristics in relation to temporal adverbial modifications. Whereas the verbs *kaa* ‘live/reside’ and *bheda* ‘wait’ cannot appear with either durative or completive adverbials, the verb *baki* ‘remain’ can co-occur with durative adverbials. However, speakers’ acceptability judgements showed uncertainty concerning the completive adverbial modification, as (395) demonstrates.

- (395) a. *fuko tika marinen (*ko iwiiki)/(*iwiiki)*
*fuko ti- ka- a marine-n (*ko iwiiki)/(*iwiiki)*
 10moles 10AGRs-live- FV 6holes-LOC (*for week)/ (week)
 ‘Moles live in the holes (*for a week)/ (*in a week)’
- b. *marinen kukaa fuko (*ko iwiiki)/(*iwiiki)*
*marine-n ku- ka- a fuko (*ko iwiiki)/(*iwiiki)*
 6holes-LOC 17- live- FV 10moles (*for week)/ (*week)
 ‘In the holes live moles (*for a week)/ (*in a week)’

- c. *marina akaa fuko(*ko iwiiki)/(?iwiiki)*
*marina a- ka- a fuko (*ko iwiiki)/(?iwiiki)*
 6holes 6AGRs-live- FV 10moles (*for week)/ (*in week)
 The holes (are the places where) moles live/reside)(*for a week)/ (*in a week)

- (396) a. *waka walebaki duken (ko masaa abhi)/(?masaa abhi)*
wa-ka wa- le- baki duke- n (ko masaa abhi)/(?masaa abhi)
 2-woman 2AGRs-PST- remain 5shop-LOC (for hours two)/ (hours two)
 ‘Women remained at the shop (for two hours)/ (?in two hours)’
- b. *duken kulebaki waka(ko masaa abhi)/(?masaa abhi)*
duken ku- le- baki wa-ka(ko masaa abhi)/(?masaa abhi)
 5shop 17- PST- remain 2-woman (for hours two)/ (hours two)
 ‘At the shop remained women (for two hours)/ (?in two hours)’
- c. *duka lyilebaki waka(ko masaa abhi)/(?masaa abhi)*
duka lyi- le- baki wa-ka(ko masaa abhi)/(?masaa abhi)
 5shop 5AGRs-PST- remain 2-woman (for hours two)/ (hours two)
 ‘The shop (is the place where) women remained(for two hours)/(?in two hours)’

Generally, verbs of existence in Kiwoso denote Stative situation type. Therefore, the events expressed by clauses with these verbs are static and lack a logical culmination. As expected, Stative verbs cannot co-occur with completive adverbials, as examples from Kiwoso also demonstrate. However, clauses with these verbs are usually compatible with durative modifiers but due to the encyclopaedic lexical semantics of individual verbal root, the verb *kaa* ‘live/reside’ and the durative adverbial modification are infelicitous, as (395) illustrates.

6.4.4.6 Causing event modification

All previous locative-subject alternation sentences examined in this study are felicitous with causing event modifiers. Similarly, the locative-subject alternation constructions with verbs of existence are compatible with causing event modification, as shown in (397).

- (397) a. *fuko tikaamarinen (kweowo iwado)*
fuko ti- ka- a marine-n (ko i-ouo i-wad-o)
 10moles 10AGRs-live- FV 6holes-LOC (by INF-fear INF-catch-PASS)
 ‘Moles live in the holes (due to fear of been caught)’
- b. *marinen kukaa fuko (kweowo iwado)*
marinen- ku- ka- a fuko (ko i-ouo i-wad-o)
 6holes-LOC 17- live- FV 10moles(by INF-fear INF-catch-PASS)
 ‘In the holes live moles (due to fear of been caught)’
- c. *marina akaa fuko(kweowo iwado)*
marina a- ka- a fuko (ko i-ouo i-wad-o)
 6holes 6AGRs-live- FV 10moles (by INF-fear INF-catch-PASS)
 ‘The holes (are the places where) moles live (due to fear of been caught)’

6.4.5 The applicative-locative constructions

In contrast to manner of motion verbs examined in section 6.3, but similarly to verbs of inherently directed motion discussed in section 6.2, verbs of existence in Kiwoso do not allow the applicative suffix, as the ungrammaticality of sentences in (398) shows. This is due to the fact that verbs of existence unlike manner of motion verbs for example, inherently involve and specify the location argument in their idiosyncratic lexical semantics. Similar cases have been noticed for VIDMs, and for verbs of spatial configuration discussed in sections 6.2 and 6.5, respectively.

- (398) a. **fuko tikaia marinen*
fuko ti- ka- i a marine-n
 10moles 10AGRs-live- APPL- FV 6holes-LOC
 ‘*The moles lived by/for in the holes’
- b. **marinen kukaia fuko*
marine-n ku- ka- i- a fuko
 6holes LOC 17- live- APPL- FV 10moles
 ‘*Into the holes live by/for the moles’

c. **marina akaia fuko*

<i>marina</i>	<i>a-</i>	<i>ka-</i>	<i>i-</i>	<i>a</i>	<i>fuko</i>
6holes	6AGRs-	live-	APPL-	FV	10moles

‘*The holes (are the places where) live by/through the moles’

To summarize the main findings of the section, Kiwoso existence verbs analyzed may occur in locative-subject alternation. Similarly to other verbs examined in 6.2 and 6.3, existence verbs show two types of alternations: variants with the subject argument taking locative morphology, and an alternate in which the subject argument occurs as a bare noun without locative morphology. Nevertheless, this morphological variation of the two alternates does not affect the semantics of the two forms. Both alternations share similar but not identical interpretation, as was also shown for other verbs. It has been established that goal/location arguments of all existence verbs examined have subject status, as examples in (385), (386), and (388) evidenced. However, the postverbal DP of these verbs lacks object properties, as shown in 6.4.3. Notice that postverbal DP occupies the postverbal position (like canonical object argument) but it is not syntactically an object. Locative-subject alternation constructions of existence verbs do not accept all modifications. Modifiers such as agent-oriented adverbials, purpose clauses, reason clauses, manner adjunct, and causing event modification are all compatible with verbs of existence. However, temporal adverbials behave differently, as shown in 6.4.4.5. Given the semantic content of existence verbs in Kiwoso, their co-occurrence with applicative morpheme is impossible, as examples in (398) demonstrate. Table 29 summarizes the properties of Kiwoso existence verbs in combination with various modifications.

Verbs of existence in Kiwoso	Subj-Loc alternation		Properties of verbs of existence in locative-subject alternation																													
			Subj.properties of goal/location				Obj.prop erties of agent/th em	Age nt- Adv	By- phra se	Purp ose	Reas on	Caus ing	Man ner	Instr ume nt	Temporal				Appl													
	Ag-subj	Theme-subj	DP ₊ loc	DP ₋ loc	S-V Agr	Subj-passiv	Passive-V	Relative-V	Expletive	Object-Agr	Subj-passiv	DP ₊ loc	DP ₋ loc	DP ₊ loc	DP ₋ loc	DP ₊ loc	DP ₋ loc	DP ₊ loc	DP ₋ loc	DP ₊ loc	DP ₋ loc	DP ₊ loc	DP ₋ loc	DP ₋		DP ₊ loc		DP ₋ loc		DP ₊ loc	DP ₋ loc	
<i>kaa</i>	✓	✓	✓	✓	✓	✓	✓	*	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	*	*	*	*	*	*
<i>baki</i>	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	?	✓	?	✓	?	*	*
<i>bheda</i>	✓	✓	✓	✓	✓	✓	✓	*	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	*	*	*	*

Table 29: Properties of verbs of existence with various modifiers in Kiwoso

6.5 Verbs of spatial configuration

Verbs of spatial configuration form a subclass of verbs of existence. Levin (1993:255) points out that as part of their meaning, these verbs specify the spatial configuration of an entity with respect to some location. It has also been observed that in locative-subject alternation constructions, these verbs are ambiguously interpreted as such but also may have spatial configuration reading (Levin 1993).

This section is devoted to examine verbs of spatial configuration in relation to locative-subject alternation in Kiwoso. Members of this class involve *damya* ‘sit’, *oroka* ‘stand’, *ongoma* ‘bend’, and *masa* ‘hang’. However, the discussion centers on the verb *damya* although peculiar cases are pointed out accordingly. Similarly to motion verbs and verbs of existence discussed in sections 6.2, 6.3 and 6.4, respectively, verbs of spatial configuration involve two types of alternations: the variants with the subject argument taking locative morphology and the alternates with the subject argument occurring as a bare noun, i.e. without locative morphology, respectively. As is the case with other verbs examined in this chapter, the two respective sentence types share a similar interpretation.

6.4.1 The agent/theme argument as subject

Similarly to the previously examined verbs, spatial configuration verbs in Kiwoso exhibit locative-subject alternation. The sentence in (399) is a canonical sentence, and canonically, the goal/location argument ‘*kidin*’ ‘on chair’ occupies the postverbal position, while an agent/theme argument *waka* ‘women’ occurs preverbally in the subject position.

- (399) *waka waledamya kidin*
 wa-ka *wa-* *le-* *damy-* *a* *kidi-n*
 2-woman 2AGRs-PST- sit- FV 7chair-LOC’
 ‘Women sat on the chair’

The goal/source/location argument (with locative morphology) as subject

The sentences examined with spatial configuration verbs exhibit two types of alternations. The alternation with the subject argument with locative morphology, as in (400), and the other variant with the subject argument without locative morphology, as in (401). The two respective

types of alternations are associated with distinct agreement morphology, as evidenced in examples (400-401).

- (400) *kidin kuledamya waka*
kidi- n ku- le- damy- a wa-ka
 7chair-LOC 17- PST- sit- FV 2-woman
 ‘On the chair sat women’

The goal/source/location argument (without locative morphology) as subject

Sentence (400) is an instance of locative-subject alternation with subject argument with locative morphology. It has been pointed out earlier that locatives are marked by the suffix *ni-*, but subject-verb agreement is generally triggered by the locative prefix *ku-*, as (400) illustrates.

- (401) *kidikiledamya waka*
kidi ki- le- damy- a wa-ka
 7chair 7AGRs-PST- sit -FV 2-woman
 ‘The chair (is the place where) women sat’

6.5.2 Subjecthood properties of goal/location subject argument

Verbs of spatial configuration analyzed in Kiwoso indicate that apart from their occurrence in preverbal position, in locative-subject alternation constructions, the goal/location subject arguments have basic characteristics of ‘true’ subjects. The sentences examined give evidence that goal/location argument in the non-canonical sentences can be the subject of passive sentences, and can also occur in relative verb clauses, as discussed in the next subsections.

The goal/location argument in passive construction

The locative subject DP in locative-subject alternation sentences both with the subject argument with and without locative morphology, respectively, can occupy the subject position in passive sentences. This indicates that the goal/location subject argument in alternate sentences are typical subjects just like canonical subjects.

- (402) a. *kidin kuledamyo na waka*
kidi- n ku- le- damy- o (na wa-ka)
 7chair-LOC 17- PST- sit- PASS (by 2-woman)
 ‘On the chair was sat(by women)’
- b. *kidikiledamyo (na waka)*
kidi ki- le- damy- o (na wa-ka)
 7chair 7AGRs-PST- sit- PASS (by 2-woman)
 ‘The chair was sat (by women)’

The goal/location argument in relative verb clause constructions

Apart from occupying and functioning as the subject of passive verb constructions, the goal/location subject argument of verbs of spatial configuration can also occur in relative verb clauses, as (403) illustrates. This compatibility reflects the subjecthood status of the goal/location argument in the alternate sentences.

- (403) a. *kidin kuledamya waka kweedeleeaa*
kidin ku- le- damy- a wa-ka (kweedeleeaa)
 7chair 17- PST- sit- FV 2-woman (there was cold)
 ‘On the chair where women sat was cold’
- b. *kidikiledamya waka kebooye*
kidi ki- le- damy- a wa-ka ke- booye
 7chair 7AGRs-PST- sit- FV 2-woman 7AGRs-wet
 ‘The chair which sat women was wet’

The locative prefix as expletive

It has been argued in subsections 6.2.2.1, 6.3.2.2 and 6.4.2.2 that in Kiwoso, the locative subject prefix *ku-* represents subject agreement prefix denoting location or place. The constructions of verbs of spatial configuration examined demonstrate that a location or a place can be indicated by the locative subject agreement prefix, as example (404) illustrates. As argued previously, the prefix *ku-* has locative subject semantic content, thus cannot be interpreted as impersonal in Kiwoso.

- (404) *kuledamya waka (kidin)*
ku- le- damy- a wa-ka (kidi-n)
 17- PST- sit- FV 2-woman (7chair-LOC)
 ‘There sat women (on the chair)’

6.5.3 The status of agent/theme in postverbal position

The constructions examined indicate that the postverbal subject of verbs of spatial configuration in Kiwoso lack object status despite occupying postverbal position. The agent/theme subject argument in locative-subject alternation constructions lack object properties, as evidenced in the passive verb constructions in example (405a), and the illicitness of the object agreement prefix in (405b). Usually, arguments with syntactic object qualities can occur as subject in the corresponding passive sentence and can be associated with an object agreement prefix in the verb morphology. Therefore, the postverbal DPs in locative-subject constructions in Kiwoso are not syntactic object, as evidenced in this section (cf. also the discussion in sections 6.2.3, 6.3.3 and 6.4.3).

- (405) a. **waka waledamyo kidin*
wa-ka wa- le- damy- o kidi-n
 2-woman 2AGRs-PST- sit- PASS 7chair-LOC
 ‘*Women were sat for on the chair’
- b. **kidinkulewadamya waka*
kidi- n ku- le- wa- damy- a wa-ka
 7chair-LOC 17 -PST- AGRo sit- FV by 2-woman
 ‘*On the chair were sat them the women’

6.5.4 The agent/theme and goal/location arguments with other modifiers

Both the causative and the anticausative alternate with verbs of spatial configuration are examined in combination with various modifications to establish their characteristics in relation to argument realization, causation, and event semantics. The following sub-sections examine locative-subject alternation sentences with various kinds of modifications.

6.5.4.1 Agent-oriented adverbial modification

- (406) a. *waka waledamya kidin (ko nashi)*
wa-ka wa- le- damy- a kidi- n (ko nashi)
 2-woman 2AGRs-PST- sit- FV 7chair-LOC (with
 angry)
 ‘Women sat on the chair (furiously)’
- b. *kidin kuledamya waka (ko nashi)*
kidi- n ku-le- damy- a wa-ka (ko nashi)
 7chair-LOC 17-PST-sit- FV 2-woman (with anger)
 ‘On the chair sat women (furiously)’
- c. *kidikiledamya waka (ko nashi)*
kidi ki- le- damy- a wa-ka (ko nashi)
 7chair 7AGRs-PST- sit- FV 2-woman (with anger)
 ‘The chair (is the place where) women sat (furiously)’

Notice that all three sentences in (406) are compatible with the agent-oriented adverbial *ko nashi* ‘furiously’. The agentive adverbial modification in sentence (406a) modifies the agent/theme argument *waka* ‘women’, whereas in (406b-c), such modification refers to the entire event expressed by the predecate.

6.5.4.2 Purpose clause modification

Similarly to agent-oriented adverbial modification discussed in the previous sub-sections, purpose clauses are compatible with sentences of spatial configuration verbs having the agent/theme subject argument as well as goal/location subject argument with and without locative morphology, respectively. However, in the sentence with agent/theme as subject, the clause modifies agent/theme argument, as shown in (407a). On the other hand, in (407b-c) sentences, the purpose clause modifies the event as a whole.

- (407) a. *waka waledamya kidin (kusudi wadede)*
wa-ka wa- le- damy- a kidi-n (kusudi wa-dede)
 2-woman 2AGRs-PST- sit- FV 7chair-LOC (so that 2AGRs-talk)
 ‘Women sat on the chair (so that they (can) talk)’

- b. *kidin kuledamya waka (kusudi wadede)*
kidi- n ku-le- damy- a wa-ka (kusudi wa-dede)
 7chair-LOC 17-PST-sit- FV 2-woman (so that 2AGRs-talk)
 ‘On the chair sat women (so that they talk)’
- c. *kidikiledamya waka (kusudi wadede)*
kidi ki- le- damy- a wa-ka (kusudi wa-dede)
 9floor 7AGRs-PST- sit- FV 2-woman (so that 2AGRs talk)
 ‘The chair (is the place where) women sat (so that they talk)’

6.5.4.3 Reason clause modification

Similarly to other verbs examined in this chapter, verbs of spatial configuration are compatible with reason phrases/clauses, as (408) illustrates.

- (408) a. *waka waledamya kidin (ko sababu yeerike)*
wa-ka wa- le- damy- a kidi-n (ko sababu ya irike)
 2-woman 2AGRs-PST- sit- FV 7chair-LOCfloor (because of
 5heat)
 ‘Women sat on the chair (because of heat)’
- b. *kidin kuledamya waka (kosababu yeerike)*
kidi- n ku-le- damy- a wa-ka (ko sababu ya irike)
 7chair-LOC 17-PST-sit- FV 2-woman (because of 5heat)
 ‘On the chair sat women (because of heat)’
- c. *kidikiledamya waka (ko sababu yeerike)*
kidi ki- le- damy- a wa-ka (ko sababu ya irike)
 7chair 7AGRs-PST- sit- FV 2-woman (because of 5heat)
 ‘The chair (is the place where) women sat (because of heat)’

6.5.4.4 Manner/Instrument adjunct modification

- (409) a. *waka waledamya kidin (ko woou)/(na nsenge)*
wa-ka wa- le- damy- a kidi- n (ko woou)/(na nsenge)
 2-woman 2AGRs-PST- sit- FV 7chair-LOC (with fear)/(by 4walking stick)
 ‘Women sat on the chair (fearful)/ (by means of a walking stick)’
- b. *kidin kuledamya waka (ko woou)/na nsenge)*
kidi- n ku-le- damy- a wa-ka (ko woou)/na nsenge)
 7chair-LOC 17-PST-sit- FV 2-woman (fearfull)/ (by 4walking stick)
 ‘On the chair sat women (fearfully)/ (by means of a walking stick)’
- c. *kidikiledamya waka (ko woou)/(na nsenge)*
kidi ki- le- damy- a wa-ka (ko woou)/(na nsenge)
 7chair 7AGRs-PST- sit- FV 2-woman (with fear)/ (by 4walking stick)
 ‘The chair (is the place where women sat (fearful)/ (by means of a walking stick)’

The constructions with spatial configuration verbs demonstrate that all sentences can co-occur with manner as well as instrument adjuncts. Manner and instrument adjuncts in (409a) modify the agent/theme argument *waka* ‘women’, but in (409b-c), the modifiers are oriented towards the event as a whole rather than the participants of the events. Manner adjunct *ko woou* ‘fearfully’ in (409a) describes how an agent performs the event, while the instrument *na nsenge* ‘with/by means of a walking stick’ provides the details about the means used by an agent to carry out the event. On the other hand, manner and instrument adjuncts in sentences (409b-c) provide information on ‘how of the event’ as a whole.

6.5.4.5 Temporal adverbials

In their basic level categorization, verbs of spatial configuration in Kiwoso denote atelic Activity event. These verbs are compatible with both durative and completive temporal adverbials, as exemplified with the verb *damya* ‘sit’ in (410). However, the two adverbials are interpreted differently. The durative phrase *ko masaa adadu* ‘for three hours’ in the sentences in (410) is understood as ‘the event of sitting spans for three hours’ without indicating the final

endpoint. By contrast, the phrase *masaa adadu* ‘in three hours’ entails that the event of sitting occurred in the three hours past.

- (410) a. *waka waledamya kidin (ko masaa adadu/masaa adadu)*
wa-ka wa- le- damy- a kidi-n (ko masaa adadu/masaa adadu)
 2-woman 2AGRs-PST- sit- FV 7chair-LOC (for hours three/hours three)
 ‘Women sat on the chair (for three hours/in three hours)’
- b. *kidin kuledamya waka (ko masaa adadu)/(masaa adadu)*
kidi- n ku-le- damy- a wa-ka (masaa adadu)/(masaa adadu)
 7chair-LOC 17-PST-sit- FV 2-woman (for hours three)/(hours three)
 ‘On the chair sat women (for three hours)/ (in three hours)’
- c. *kidikiledamya waka (ko masaa adadu)/(masaa adadu)*
kidi ki- le- damy- a wa-ka (ko masaa adadu)/(masaa adadu)
 7chair 7AGRs-PST- sit -FV 2-woman (forhours three)/ (hours three)
 ‘The chair (is the place where) women sat (for three hours)/ (in three hours)’

6.5.4.6 Causing event modification

Sentences with spatial configuration verbs examined in this study can co-occur with causing event modification. The causing event modifiers such as *kweelasimisho* in (411a) modifies the agent/theme argument *waka* ‘women’ whereas in sentences (411b-c) it modifies the event denoted by the verb phrase.

- (411) a. *waka waledamya kidin (kweelasimisho)*
wa-ka wa- le- damy- a kidi- n (ko i-lasimish-o)
 2-woman 2AGRs-PST- sit- FV 7chair-LOC (by INF-force-PASS)
 ‘Women sat on the floor (by been forced)’
- b. *kidin kuledamya waka (kweelasimisho)*
kidi- n ku-le- damy- a wa-ka (ko i-lasimish-o)
 7chair-LOC 17-PST-sit- FV 2-woman (by INF-force-PASS)
 ‘On the chair sat women (by been forced)’

- c. *kidikiledamya waka (kweelasimisho)*
kidi ki- le- damy- a wa-ka (ko i-lasimish-o)
 7chair 7AGRs-PST- sit- FV 2-woman (by INF-force-PASS)
 The chair (is the place where) women sat (by been forced)'

6.5.5 The applicative-locative sentences

The sentences of verbs of spatial configuration examined indicate that these verbs cannot co-occur with applicative suffix, as ungrammaticality of sentences in (412-413) demonstrate.

- (412) a. **waka waledamya kidin*
wa-ka wa- le- damy- i- a kidi- n
 2-woman 2AGRs-PST- sit- APPL-FV 7chair-LOC
 '*Women sat for on the chair'
- b. **kidin kuledamya waka*
kidi- n ku-le- damy- i a wa-ka
 7chair-LOC 17-PST-sit- APPL-FV 2-woman
 '*On the chair was sat on for women'
- c. **kidikiledamya waka*
kidi ki- le- damy- i a wa-ka
 7chair 7AGRs-PST- sit- APPL- FV 2-woman
 '*The chair is the place where was sat for women'
- (413) a. **wandu waleorokia duken*
wa-ndu wa- le- orok- i- a duke-n
 2-person 2AGRs-PST- stand- APPL- FV 5shop-LOC
 '*People stood for into the shop'
- b. **dukenkuleorokia wandu*
duke-n ku- le- orok- i- a wa-ndu
 5shop-LOC 17AGRs-PST-stand- APPL-FV 2-person
 '*Into the shop stood for the people'

- c. **duka lyileorokia wandu*
duka lyi- le- orok- i- a wa-ndu
 5shop 5AGRs-PST- stand- APPL-FV 2-person
 ‘*The shop (is the place where) stood for the people’

Notice that neither the verb *damya* ‘sit’ nor *oroka* ‘stand’ can appear with the applicative suffix in Kiwoso in either sentences with agent/theme argument as subject or sentences with goal/location argument as subject. Basically, as part of their meaning, verbs of spatial configuration in Kiwoso specify the location/position and do not involve direction or path of motion. It has been pointed out in section 6.2.5 that one of the roles of applicative suffix in locative-subject alternation constructions in Kiwoso is to specify the location/position or to introduce the goal or direction of motion. Therefore, similarly to verbs of inherently directed motion, and verbs of existence discussed in sections 6.2 and 6.4, respectively, verbs of spatial configuration cannot co-occur with applicative suffix. This is because semantically, these verbs inherently lexicalize the direction of motion.

Summarizing this section, it has been demonstrated that verbs of spatial configuration in Kiwoso participate in locative-subject alternation. It has been evidenced that similarly to other verbs examined in this part, verbs of spatial configuration exhibit two types of alternations. One variant has subject argument with locative morphology, while the other does not. The two alternates differ in terms of morphology but they are, however, semantically similar. The sentences of verbs of spatial configuration examined demonstrate that all preverbal locative DPs prohibit subject properties, as examples (400-413) demonstrate. The findings give evidence that the postverbal DPs of these verbs cannot be characterized as object as they do not observe the object diagnostics, as exemplified in (405). Locative-subject constructions of verbs of spatial configuration in Kiwoso are compatible with all modifiers, however, with different interpretations. The results of the verbs examined demonstrate that these verbs do not allow suffixation of the applicative morpheme due to their lexical semantic properties.

The properties of verbs of spatial configuration are summarized in table 30.

Verbs of spatial configuration in Kiwoso	Subj-Loc alternation		Properties of verbs of spatial configuration in locative-subject alternation																												
			Subj.properties of goal/location				Obj.prop erties of agent/th em		Age nt- Adv		By- phra se		Purp ose		Reas on		Caus ing		Man ner		Instr ume nt		Temporal				Appl				
	Ag-subj	Theme-subj	DP ₊ loc	DP ₋ loc	S-V Agr	Subj-passiv	Passive-V	Relative-V	Expletive	Object-Agr	Subj-passiv	DP ₊ loc	DP ₋ loc	DP ₊ loc	DP ₋ loc	DP ₊ loc	DP ₋ loc	DP ₊ loc	DP ₋ loc	DP ₊ loc	DP ₋ loc	DP ₊ loc	DP ₋ loc	DP ₋		DP ₊ loc		DP ₋ loc		DP ₊ loc	DP ₋ loc
																								F	I	F	I	F	I		
<i>damya</i>	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*
<i>oroka</i>	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*
<i>masa</i>	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*
<i>ongoma</i>	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*

Table 30: Properties of verbs of spatial configuration with different modification in Kiwoso

6.6 The locative-subject alternation sentences with change of state verbs in Kiwoso

The locative-subject constructions examined for Kiwoso demonstrate that, similarly to motion verbs discussed in sections 6.2 and 6.3, and verbs of existence discussed in 6.4 and 6.5, change of state verbs such as *kora* ‘cook’, *tana* ‘build’, *soma* ‘read’, and *lya* ‘eat’ participate in the locative-subject alternation. In the same fashion, the change of state verbs analyzed exemplify two types of alternations: an alternation with the subject argument having locative morphology, and a variant in which the subject argument appears as a bare noun without locative morphology, as demonstrated in examples (415) and (416), respectively. However, it should be noted that, the two variants are semantically similar as is the case with motion verbs and verbs of existence examined in the previous sections. Since it is impractical to present all various types of change of state verbs that exhibit locative-subject alternation, the discussion of these verbs in relation to such alternation focuses on the verb *kora* ‘cook’.

6.6.1 The agent/theme argument as subject

(414) *waka walekora kelya rukon*

<i>wa-ka</i>	<i>wa-</i>	<i>le-</i>	<i>kor-</i>	<i>a</i>	<i>kelya</i>	<i>ruko-</i>	<i>n</i>
2-woman	2AGRs-PST-	cook-	FV	7food	9kitchen-LOC		

‘Women cooked food in the kitchen’

The goal/location argument (with locative morphology) as subject

(415) *rukon kulekora kelya*

<i>ruko-</i>	<i>n</i>	<i>ku-</i>	<i>le-</i>	<i>kor-</i>	<i>a</i>	<i>kelya</i>
9kitchen-LOC	17-	PST-	cook-	FV	7food	

‘In the kitchen (fireplace) cooked food’

The goal/location argument (without locative morphology) as subject

(416) *ruko lyilekora kelya*

<i>ruko</i>	<i>lyi-</i>	<i>le-</i>	<i>kor-</i>	<i>a</i>	<i>kelya</i>
9pot	9AGRs-PST-	cook-	FV	7food	

‘The kitchen (is the place where) food cooked’

6.6.2 The status of goal/location argument as subject

Similarly to motion verbs and verbs of existence constructions examined in subsections 6.2, 6.3 and 6.4, 6.5, the goal/location argument of change of state verbs exhibits properties of a canonical subject. The goal/location argument triggers subject-verb agreement, as examples in (415) and (416) demonstrate. Furthermore, like typical subject, the goal/location argument can be used in passive verb constructions and relative verb clauses, as sentences in (417) and (418) exemplify.

The goal/location argument as subject in passive verb constructions

- (417) a. *rukon kulekoro kelya*
ruko- n ku- le- kor- o kelya
 9kitchen- LOC 17- PST- cook- PASS 7food
 ‘In the kitchen was cooked food’
- b. *rukolyilekoro kelya*
ruko lyi- le- kor- o kelya
 9kitchen 9AGRs-PST- cook- PASS 7food
 ‘The kitchen (is the place where) food was cooked’

The goal/location argument as subject in relative verb clauses

- (418) a. *rukon kulekora kelya kufane*
ruko- n ku- le- kor- a kelya ku-fane
 9kitchen- LOC 17- PST- cook- FV 7food 17-dirty
 ‘In the kitchen where cooked food is dirty’
- b. *ruko lyilekora kelya lyifane*
ruko lyi- le- kor- a kelya lyi-fane
 9kitchen 9AGRs-PST- cook- FV 7food 9-dirty
 ‘The kitchen where cooked food is dirty’

The locative prefix as expletive

It has been demonstrated in the previous sections that the locative prefix *ku-* in Kiwoso involves locative subject agreement prefix, thus it has semantic content referring to a location/position

in the discourse context. The findings of the study demonstrate that the locative content of the prefix *ku-* is available even when the location/position is not mentioned, as (419) indicates.

- (419) a. *kulekora kelya (rukon)*
ku- le kor- a kelya (rukon-n)
 17- PST cook- FV 7food (9kitchen-LOC)
 ‘There cooked food (in the kitchen)’

6.6.3 The agent/theme and goal/location arguments with various modifiers

Similarly to other locative-subject alternation sentences analyzed in this chapter, change of state verbs are examined with respect to their co-occurrence with different modifications to determine their characteristics in terms of argument realization and event semantics. The modifiers examined are discussed in the following subsections.

6.6.3.1 Agent-oriented adverbial modification

- (420) a. *waka walekora kelya rukon (ko makusudi)*
wa-ka wa- le- kor- a kelya ruko-n (ko makusudi)
 2-woman 2AGRs-PST- cook- FV 7food 9kitchen-LOC (with
 purpose)
 ‘Women cooked food in the kitchen (intentionally)’
- b. *rukun kulekora kelya (ko makusudi)*
ruko-n ku- le- kor- a kelya (ko makusudi)
 9kitchen-LOC 17- PST- cook- FV 7food (with purpose)
 ‘In the kitchen cooked food intentionally’
- c. *ruko lyilekora kelya (ko makusudi)*
ruko lyi- le- kor- a kelya (ko makusudi)
 9kitchen 9AGRs-PST- cook- FV 7food (with purpose)
 ‘The kitchen (is the place where) food cooked (purposely)’

Sentences in (420) demonstrate that locative-subject alternation sentences with change of state verbs can appear with agentive adverbial modification. The adverbial *ko makusudi*

‘intentionally’ in (420a) modifies the agent/theme argument *waka* ‘women’, whereas in sentences (420b-c) such an adverbial modifies the *cooking* event as a whole.

6.6.3.2 Prepositional phrase modification

It has been observed in chapter 5 section 5.4.3 that passive sentences in Kiwoso can include an agentive *by*-phrase which is exclusively introduced by *na*-phrase ‘*by*-phrase’. Also, it is shown that anticausative variants of change of state verbs may include a *ko*-phrase which expresses event modifiers. Similarly to the (anti-)causative constructions of change of state verbs, locative-subject alternation sentences exhibit similar characteristics in terms of prepositional phrase modification. The findings of this study establish that locative-subject alternation constructions with the goal/location argument as subject can co-occur with a *ko*-phrase, but cannot appear with a *na*-phrase, as (421a) indicates. On the contrary, the passive sentence in (421b) is compatible with a *na*-phrase but not a *ko*-phrase.

- (421) a. *rukun kulekora kelya (ko waka)/ (*na waka)*
*ruko-n ku- le- kor- a kelya (ko waka)/ (*na waka)*
 9kitchen-LOC 17- PST- cook- FV 7food (to 2-woman)/ (*by 2-woman)
 ‘In the kitchen cooked food (to the ability/potentiality of women)/ (*by women)’
- b. *rukun kulekoro kelya (na waka)/ (*ko waka)*
*ruko- n ku- le- kor- o kelya (na waka)/ (*ko waka)*
 9kitchen-LOC 17- PST- cook- PASS 7food (by 2-woman)/ (*to 2-woman)
 ‘In the kitchen was cooked food (by women)/ (*to women)’

6.6.3.3 Purpose phrase/clause modification

Similarly to agent-oriented adverbial modification discussed above, locative-subject alternation sentences are compatible with purpose phrases/clauses. In sentence (422a) with the agent/theme argument as subject, the clause *kusudi kishē nīcha* ‘so that it cooks well’ denotes the reason as to why the agent/theme arguments carry out the described event in or at the specified location, while in (422b-c), such a clause refers to the general event answering the question why an event of cooking had to take place at such a location.

- (422) a. *waka walekora kelya rukon (kusudi kishe nicha)*
wa-ka wa- le- kor- a kelya ruko-n (kusudi kishe nicha)
 2-woman 2AGRs-PST- cook- FV 7food 9kitchen-LOC (so that cook well)
 ‘Women cooked food in the kitchen (so that it cooks well)’
- b. *rukun kulekora kelya (kusudi kishe nicha)*
ruko- n ku- le- kor- a kelya (kusudi kishe nicha)
 9kitchen-LOC 17- PST- cook- FV 7food (so that it cooks well)
 ‘In the kitchen cooked food (so that it cooks well)’
- c. *ruko lyilekora kelya (kusudi kishe nicha)*
ruko lyi- le- kor- a kelya (kusudi kishe nicha)
 9pot 9AGRs-PST- cook- FV 7food (so that it cooks well)
 ‘The kitchen (is the place where) food cooked (so that it cooks well)’

6.6.4.4 Reason phrase/clause modification

The sentences of change of state verbs analyzed in relation to locative-subject alternation indicate that these sentences can be modified by reason phrases/clauses, as exemplified in (423). The examples illustrate that when a reason clause/phrase appears with sentences in which the agent/theme argument is the subject, such a phrase/clause modifies the agent/theme argument, as shown in (423a). By contrast, in the sentences with the goal/location argument as subject, the modification refers to the event, as (423b-c) demonstrate.

- (423) a. *waka walekora kelya rukon (ko sababu ya mmbo)*
wa-ka wa- le- kor- a kelya rukon-n (ko sababu ya mmbo)
 2-woman 2AGRs-PST- cook- FV 7food 9kitchen-LOC (because of rain)
 ‘Women cooked food in the kitchen (because of rain)’

- b. *rukon kulekora kelya (ko sababu ya mmbo)*
ruko- n ku- le- kor- a kelya (ko sababu ya mmbo)
 9kitchen-LOC 17- PST- cook- FV 7food (because of rain)
 ‘In the kitchen cooked food (because of the rain)’
- c. *ruko lyilekora kelya (ko sababu ya mmbo)*
ruko lyi- le- kor- a kelya (ko sababu ya mmbo)
 9kitchen 9AGRs-PST- cook- FV 7food (because of rain)
 ‘The kitchen (is the place where) food cooked (because of the rain)’

6.6.4.5 Temporal adverbial modification

Verbs of change of state examined in relation to locative-subject alternation are compatible with both durative and completive temporal adverbials, as exemplified by sentences with the verb *kora* ‘cook’ in (424). Change of state verbs examined in relation to locative-subject alternation denote atelic Activity events with arbitrary endpoints. However, when these verbs appear with telic adverbials such as *nusu saa* ‘in half an hour’ the events expressed receive an Accomplishment reading. However, durative adverbials such as *ko nusu saa* ‘for half an hour’ has the basic aspectual type of the verb.

- (424) a. *waka walekora kelya rukon (ko nusu saa)/(nusu saa)*
wa-ka wa- le- kor- a kelya ruko-n (ko nusu saa)/(nusu saa)
 2-woman 2AGRs-PST- cook- FV 7food 9kitchen-LOC (for half hour)/ (half hour)
 ‘Women cooked food in the kitchen (for half an hour)/ (in half an hour)’
- b. *rukon kulekora kelya (ko nusu saa)/(nusu saa)*
ruko-n ku- le- kor- a kelya (ko nusu saa)/(nusu saa)
 9kitchen-LOC 17- PST- cook- FV 7food (for half hour)/ (half hour)
 ‘In the kitchen cooked food (for half an hour)/ (in half an hour)’
- c. *ruko lyilekora kelya (ko nusu saa)/(nusu saa)*
ruko lyi- le- kor- a kelya (ko nusu saa)/(nusu saa)
 9kitchen9AGRs-PST- cook- FV 7food (for half hour)/ (half (hour)
 ‘The kitchen (is the place where) food cooked (for half an hour)/ (in half an hour)’

The sentences with the durative adverbials such as *ko nusu saa* ‘for half an hour’ as in *waka walekora kelya rukon ko nusu saa* denotes that the event of cooking spans for half an hour, but it does not entail its completion. The adverbial *ko nusu saa* ‘for half an hour’ delimites or bounds the duration of the event denoted by the verb phrase. By contrast, the sentence *waka walekora kelya rukon (nusu saa)* has the interpretation that the event of cooking happened and was completed within the period of half an hour, hence a telic interpretation is derived from an atelic eventuality.

6.6.4.6 Manner/Instrument modification

All sentences examined in relation to manner and instrument adjunct modification are compatible with both modifications. In example (425a), the manner and instrument phrase modifications describe the agent/theme argument *waka* ‘women’ whereas in (425b-c), these modifiers refer to the entire event expressed by the verb phrase.

- (425) a. *waka walekora kelya rukon (nicha)/(na makaa)*
wa-ka wa- le- kor- a kelya ruko-n (nicha)/(na makaa)
 2-woman 2AGRs-PST- cook- FV 7food 9kitchen-LOC (nice)/
 (with charcoal)
 ‘Women cooked food in the kitchen (nicely)/ (by means of charcoal)’
- b. *rukon kulekora kelya (nicha)/(na makaa)*
ruko- n ku- le- kor- a kelya (nicha)/(na makaa)
 9kitchen-LOC 17- PST- cook- FV 7food (nice)/ (with 6charcoal)
 ‘In the kitchen cooked food (nicely)/ (by means of charcoal)’
- c. *ruko lyilekora kelya (nicha)/(na makaa)*
ruko lyi- le- kor- a kelya (nicha)/(na makaa)
 9kitchen 9AGRs-PST- cook- FV 7food (nice)/(with 6charcoal)
 ‘The kitchen (is the place where) food cooked (nicely)/ (by means of charcoal)’

6.6.5 The applicative-locative construction

The sentences with verbs of change of state examined for Kiwoso illustrate that the applicative suffix is acceptable in sentences with agent/theme subject argument as well as sentences with

a goal/location subject argument with and without locative morphology, respectively, as shown in (426b-c). In both cases, the applicative suffix specifies the location/position and brings about an exclusivity interpretation.

- (426) a. *waka walekoria kelya rukon*
wa-ka wa- le- kor- i a kelya ruko-n
 2-woman 2AGRs-PST- cook-APPL FV 7food 9kitchen-LOC
 ‘Women cooked food (exclusively) in the kitchen’
- b. *rukon kulekoria kelya*
ruko- n ku- le- kor- i a kelya
 9kitchen-LOC 17- PST- cook-APPL FV 7food
 ‘In the kitchen(exclusively) cooked food’
- c. *ruko lyilekoria kelya*
ruko lyi- le- kor- i a kelya
 9kitchen 9AGRs-PST- cook-APPL FV 7food
 ‘Kitchen (is the exclusive place where) food cooked’

In summary, this section discussed locative-subject alternation sentences of change of state verbs. The examples illustrate that, similarly to motion verbs and verbs of existences examined in sections 6.2, 6.3 and 6.4, 6.5, respectively, change of state verbs participate in locative-subject alternation. Sentences with change of state verbs exhibit two kinds of alternations. In one of the variants involves subject argument taking locative morphology, whereas in the other alternate the subject argument lacks locative morphology. However, the two alternates have a similar interpretation, as was demonstrated by sentences with other verbs discussed in this chapter. The results of the sentences examined indicate that the goal/location argument as subject in the alternates observe diagnostics for subjecthood. For example, the goal/location subject argument triggers agreement on verbs, as evidenced in examples (415-416), and can occur in passive verb constructions and in relative verb clauses, as examples in (417) and (418), respectively demonstrate. The locative-subject alternation constructions of change of state verbs have been examined in relation to various types of modification, namely agentive phrases, purpose phrase/clauses, reason clause, temporal modifiers, and manner and instrument adjunct modification. Similarly to motion verbs and verbs of existence, the various kinds of

modification can occur in sentences with these verbs but their interpretations differ depending on the type of modification employed. The findings further indicate that change of state verbs can be used in sentences with the locative-applicative suffix. The applicative suffix denotes an exclusiveness reading of the location/position denoted by the verb in the sentences.

Table 31 summarizes the features of locative-subject alternation sentences of change of state verbs as well as their characteristics in combination with different modifiers.

Change of state verbs in Kiwoso	Subj-Loc alternation				Properties of change of state verbs in locative-subject alternation																												
					Subj.properties of goal/location					Obj.prop erties of agent/th em		A- orien ted	By- phra se		Purp ose		Reas on		Caus ing		Man ner		Instr ume nt		Temporal						Appl		
	Ag-subj	Theme-subj	DP ₊ loc	DP ₋ loc	S-V Agr	Subj-passiv	Passive-V	Relative-V	Expletive	Object-Agr	Subj-passiv	DP ₊ loc	DP ₋ loc	DP ₊ loc	DP ₋ loc	DP ₊ loc	DP ₋ loc	DP ₊ loc	DP ₋ loc	DP ₊ loc	DP ₋ loc	DP ₊ loc	DP ₋ loc	DP-		DP ₊ loc		DP ₋ loc		DP ₊ loc	DP ₋ loc		
																								F	I	F	I	F	I				
<i>kora</i>	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>tana</i>	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>soma</i>	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>lya</i>	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Table 31: Properties of change of state verbs in locative-subject alternation constructions in Kiwoso

6.7 Argument realization, causation, and event semantics of locative-subject constructions in Kiwoso

It has been demonstrated in chapter 3 that both change of state verbs and change of location/position verbs can be used transitively and intransitively. Verbs which participate in locative-subject alternation are viewed as change of state verbs as they are conceptualized as involving change of location/position (cf. Levin & Rappaport Hovav 1991; Beavers et al. 2010; Martin & Schäfer 2014). As is the case with the verbs of change of state analyzed in chapter 5, change of location/position verbs in Kiwoso are examined in relation to their occurrence in the (anti-)causative alternation, argument realization and their event semantics. This subsection discusses the locative-subject alternation constructions of motion verbs, verbs of existence, verbs of spatial configuration as well as change of state verbs in terms of event decomposition and argument realization. It has also been argued in chapter 4 that locative-subject alternation constructions exemplify grammatical relation changing in Bantu languages (cf. section 4.10). Studies on grammatical relation changing operations have been very fruitful to the understanding of morphosyntax and lexicon-semantic interfaces. Locative-subject alternation sentences in Kiwoso illustrate grammatical relation changing constructions, as sentences with various semantic verbs classes examined in sections 6.2-6.6 demonstrate. This subsection offers an analysis of the sentences constructions examined in the previous sections.

6.7.1 Anticausative properties of motion verbs as change of location/position verbs

The sentences with motion verbs, verbs of existence and change of state verbs examined in section 6.2-6.6 demonstrate that all verbs can occur in sentences that exhibit the locative-subject alternation. The sentences examined illustrate that these verbs denote two types of alternations: the alternate with the subject goal/location argument taking locative morphology, and the variant in which the subject goal/location argument appears without locative morphology. The former has been termed as the formal locative, while the latter is referred to as the semantic locative (Buell 2007). In Kiwoso, the two alternates are semantically similar, but differ in terms of their morphosyntax. The variant with the goal/location subject argument taking locative morphology involves a noun with a locative suffix *ni-* and the verb agrees with a locative class 17 prefix *ku-*. The alternate with the goal/location subject argument appearing without locative morphology consists a bare subject noun, of which the verb agrees with. The discourse-pragmatic choice of one variant rather than the other depends on the argument the speakers want to give prominence to. According to the views of Kiwoso native speakers, locative-subject sentences with the goal/location subject argument taking locative morphology are

preferred when the location is the prominent elements in the conversation. On the other hand, when the location argument is insignificant in terms of speakers' communicative intention, sentences with the goal/location argument as subject involving bare nouns are used. This suggests that the respective alternation with the goal/location subject argument with locative morphology and without locative morphology, respectively have similar but not identical interpretations because location is more prominent in the former alternate than is the case in the latter variant.

The findings of this study demonstrate that verbs of motion, existence verbs, and verbs of spatial configuration, as well as change of state verbs productively exhibit locative-subject alternation. However, within and across semantic subclasses of motion verbs (for example verbs of inherently directed motion and manner of motion verbs) and verbs of existence (for example existence verbs and verbs of spatial configuration) as well as change of state verbs (for example *cook* verbs and *build* verbs) examined in this study are not homogeneous in relation to locative-subject alternation constructions. This flexibility point to the idiosyncratic property of individual verb roots. The properties observed for change of location/position verbs in Kiwoso provide evidence for the main proposals put forward in the syntactic decomposition approach by Alexiadou et al. (2006) and Alexiadou (2010) (see chapter 1 subsection 1.8.1).

It has been pointed out that the approach adopted in the present study assumes the distributed morphology (DM) perspective which assumes that verbs are derived from a category neural roots via the addition of verbalizing heads (Halle & Marantz 1993) (see also chapter 3, section 3.4 for details on DM). However, individual verbs have idiosyncratic lexical semantic characteristics which differentiate one verb from the other, in terms of for example syntactic categorization frame. The verbs of motion, existence verbs and change of state verbs analyzed in this study share similar characteristics in that they productively occur in locative-subject alternation and, therefore, can generally be categorized with the node vCAUS. This suggests that these verbs exhibit alternations parallel to the causative and anticausative alternation sentences discussed in chapter 5 for change of state verbs.

6.7.2 Event decomposition of change of location/position verbs in Kiwoso

It has been shown in chapter 5 that change of state verbs include externally caused change of state verbs, which are morphologically marked in their anticausative forms, and internally caused change of state verbs which are unmarked. The semantic classes examined for motion verbs, verbs of existence and change of state verbs in relation to locative-subject alternation in Kiwoso indicate that these verbs are all unmarked in both transitive and intransitive uses. As is the case with the (anti-

)causative constructions of change of state verbs examined in chapter 5, the analysis of locative-subject alternation constructions of motion verbs, verbs of existence and change of state verbs explored in this chapter employs syntactic decomposition approach with the assumption that similarly to change of state verbs, change of location/position verbs are base-generated, thus there is no derivational relationship involved between the sentences with agent/theme argument as subject and those with a goal/location argument (with or without locative morphology) as subject.

The results of this study give evidence that unlike the (anti-)causative alternations with change of state verbs discussed in chapter 5, locative-subject alternations of change of location/position verbs (cf. sections 6.2-6.6) indicate that for adequate syntactic and semantic interpretations, the sentences require two participants, namely the location and the agent/theme arguments, as examples in (353), repeated here for convenience as (427), illustrate.

- (427) a. *waka waleida duken*
 wa-ka wa- le- id- a duke-n
 2-woman 2AGRs-PST- enter- FV 5shop-LOC
 ‘Women entered (into) the shop’
- b. *duken kuleida waka*
 duke- n ku- le- id- a wa-ka
 5shop-LOC 17- PST- enter- FV 2-woman
 ‘Into the shop entered women’
- c. *duka lyileida waka*
 duka lyi- le- id- a wa-ka
 5shop 5AGRs-PST- enter- FV 2-woman
 ‘The shop (is the place where) women entered’
- [vP [Root [_{SC} DP_{theme} DP_{loc}]]]

The subject agent/theme argument *waka* ‘women’ and the subject location argument *duka* ‘shop’ occurring with and without locative morphology in (427b) and (427c), respectively, are obligatory arguments of the motion event described by the verb *ida* ‘enter’ in Kiwoso.

It has been demonstrated that in locative-subject alternation sentences, like (427b-c), the locative subject DPs (with and without locative morphology, respectively) occupy the subject position and

display the features typical of the subject. It has been evidenced that these locative subject DPs can occur in passive and relative verb clauses, and they can trigger agreement on verbs. Similar characteristics have been observed in many other Bantu languages (cf. chapter 4, section 4.10 and its subsections). The locative-subject alternations examined in this chapter further demonstrate that, although the postverbal arguments of these constructions occupy object position, they lack core object features. It has been established that in Kiwoso similarly to other Bantu languages, the postverbal argument cannot occur as subject in passive verb clauses, or take relative clause modifiers, or be associated with an object agreement prefix in the verbal morphology (cf. sections 6.2.3-6.6.3 for Kiwoso examples, and chapter 4 sections 4.10.1-4.10.5 for evidence from other Bantu languages). This suggests that the postverbal argument in locative-subject alternation in Kiwoso cannot be analyzed as a syntactic object.

Therefore, to account for the properties of the locative DP and the theme DP of locative-subject alternation sentences in Kiwoso, an alternative account invoking Small Clause structure analysis is postulated (cf. Hoekstra & Mulder, 1990; Irwin, 2012). According to the Small Clause (SC) analysis, the theme is predicated of a location, and the verb does not assign a thematic role to it, thus the two arguments, i.e. the theme DP *waka* ‘women’ and the locative DP *duka* ‘shop’ are in predication relationship. A Small Clause which is the complement, and an internal argument of the verb contains the theme and the location arguments (cf. figure 19).

It has been established that both the locative and the theme DPs originate in vP-internal position. According to the assumptions of the current Minimalist version of generative syntax (Radford 1997; Baker 2013), subjects carry a strong nominative case feature which needs to be checked in the Spec,TP position. Therefore, adopting this view of minimalism, it can be assumed that in the canonical sentence (428b), the theme DP moves to the Spec,TP position to check its nominative case and the subject agreement features on T, whereas the locative DP remains in its base position where it is assigned inherent case. This derivation is schematized in figure 19. Agent/theme subject alternate of locative-subject alternation constructions in Kiwoso and the structural representations, with the bracket notation representation in (428b), and the tree diagram representation in figure 19 are exemplified in (428).

- (428) a. *waka waleida duken*
 waka *wa-* *le-* *id-* *a* *duke-n*
 2-woman 2AGRs-PST- enter- FV 5shop-LOC
 ‘Women entered into the shop’

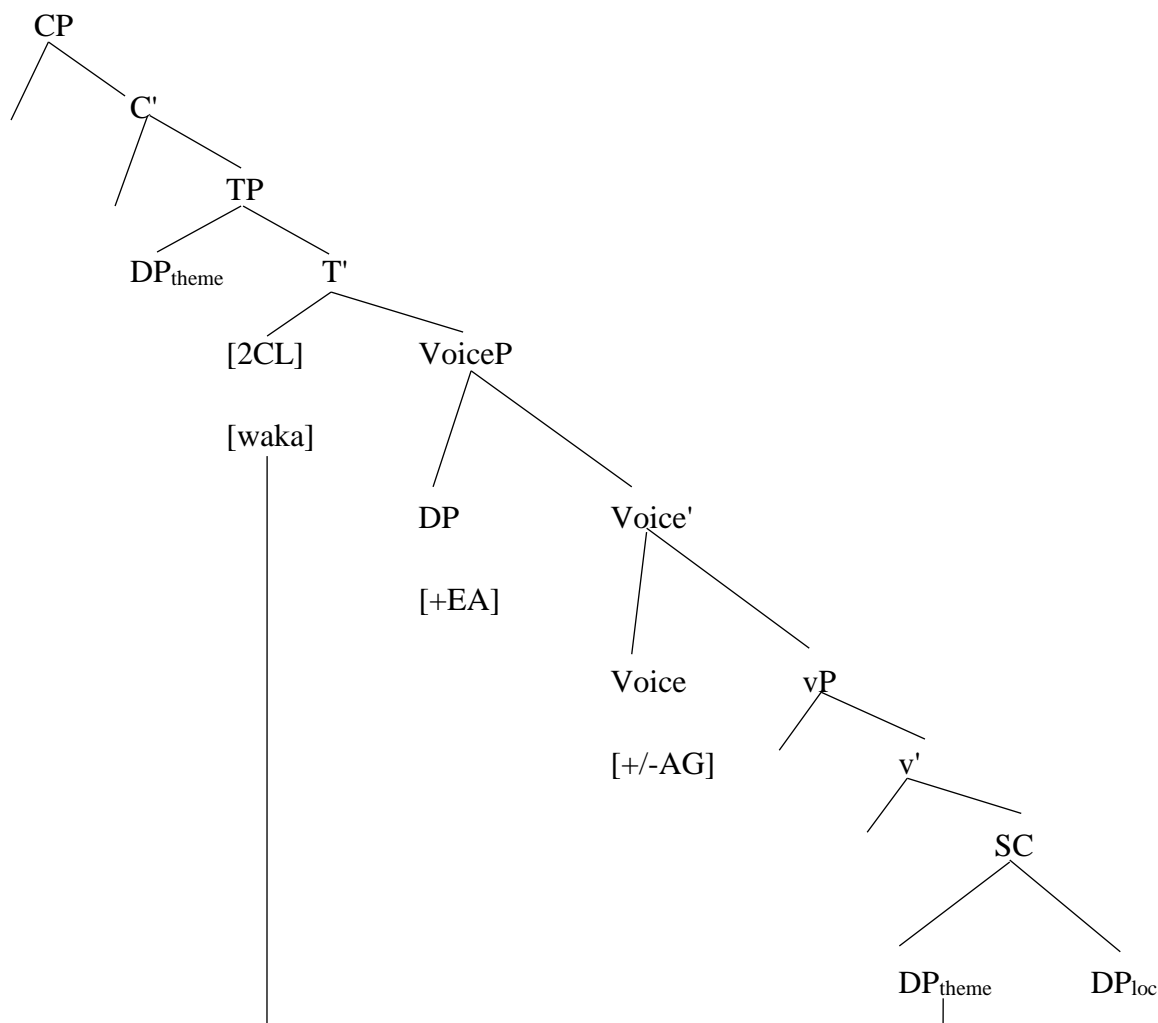
b. [Voice [vP [Root [SC DP_{theme} DP_{loc}]]]]

Figure 19: Event decomposition of causative sentences with the verb *ida* 'enter' in Kiwoso

Figure 19 represents the causative variants of locative-subject alternation constructions of motion verbs, verbs of existence, and change of state verbs in Kiwoso having an agent/theme argument as subject and a locative DP as a complement. Similarly to the causative variants of change of state verbs discussed in chapter 5, sentences of change of location/position verbs examined in this chapter have a Voice functional head, which introduces the external argument. In figure 19, Voice denotes the relation between the DP argument *waka* 'women' and the motion event denoted by the verb *ida* 'enter' with respect to the identified location. It has been argued that the logical subject DP and the locative DP in locative-subject alternation constructions are in a predication relationship of a Small Clause¹². In the Small Clause analysis, both subject and the locative DP are vP-internal arguments. The Small

¹²The projection Small Clause is also labeled as PredP (Predication Phrase) (cf. Irwin 2012; Zeller 2013).

Clause selects the logical subject DP as its specifier (subject) and the verb selects the locative DP as its complement as figure 19 illustrates. Notice, however, that the predication relationship between the two DPs of locative-subject alternation sentences is an asymmetrical one. It has been argued that such kind of relationship is key for the introduction of a new discourse referent (cf. Salzmann 2004; Irwin 2012).

The analysis in section 6.7 establishes that in the sentences of motion verbs, verbs of existence as well as change of state verbs, locative DPs occupy subject position and display all characteristics of typical subject (cf. sections 6.2.2-6.6.2). Sentences with locative DPs as subject are aspectually understood as denoting derived States eventualities, as examples in (354a-355a), and (371-372) (among others) repeated here as (429a-b) and (430a- b) illustrate.

- (429) a. *duken kuleida waka*
duke- n ku- le- id- a wa-ka
 5shop-LOC 17- PST- enter- FV 2-woman
 ‘Into the shop entered women’
- b. *duka lyileida waka*
duka lyi- le- id- a wa-ka
 5shop 5AGRs-PST-enter- FV 2-woman
 ‘The shop (is the place where) women entered’
- (430) a. *ukuten kuletola wana*
ukute- n ku- le- tol- a wa-na
 11fence-LOC 17- PST- jump- FV 2-child
 ‘Over/at the fence jumped children’
- b. *ukuta luletola wana*
ukuta lu- le- tol- a wa-na
 11fence 11AGRs-PST-jump- FV 2-child
 ‘The fence (is the place where) children jumped’

The fact that sentences with the subject argument with and without locative morphology, respectively with the goal/location argument as subject are interpreted as Statives they, therefore, lack expression of an external argument, thus do not contain Voice head. However, similarly to the transitive variants,

sentences with locative DPs as subject contain vP head that denotes the coming into existence of the ‘direct object’ (the postverbal subject) with respect to a location. The alternate sentences, just like the transitive (causative) variants of locative-subject alternation sentences involve two obligatory DPs which are in predication relationship. It has been argued previously that this predication is established by a Small Clause. Therefore, similarly to transitive verb sentence constructions, the constructions with goal/location subject argument with or without locative morphology, respectively involve a Small Clause structure, which denotes a predication between the locative subject argument and the postverbal argument in the locative-subject alternation sentences.

It has been argued above that both locative and the theme DPs originate within vP but move out of that position in the course of derivation. This concurs with the Minimalist approach views which assumes that sentences are built up step by step, by merging new elements into the structure, or by rearranging elements already in the construction via a Move operation. The change of location/position verbs examined in Kiwoso indicate that in their intransitive use, the location DPs occupy subject positions. Adopting the current minimalism view of Agree relation (cf. Chomsky 2000, 2001), the locative subject argument in the sentences (431) can be viewed as an active goal. Given the minimalist view that the operation Agree is an operation between a probe (which carries uninterpretable and unvalued features) and a goal (which constitutes interpretable and valued features), the locative DP as an active goal has to move to the Spec,TP position to check its uninterpretable nominative case and the EPP features on T (on the probe) (cf. figure 20).

It has also been pointed out that the goal/location subject argument of locative-subject constructions is used for discourse function of presentational focus. Therefore, for locative DPs to occupy subject position, the agent/theme DP should be presentationally focussed. Indeed, the locative-subject alternation sentences examined in Kiwoso give evidence that the postverbal argument occurs in a Focus position, whereas the locative DP has a discourse-pragmatic Topic function, hence it occurs in a topic position. Therefore, in the structure of the sentences with the goal/location subject argument, the theme DP remains in its base position to check its focus feature or rather can be assumed to move covertly to the specifier FocP, whereas the locative DP moves via Spec,TP position to the specifier of TopP to check its topic feature. The derivation of the goal/location subject sentences of change of location/position verbs in Kiwoso is as represented in figure 20. Examples in (431a-b) illustrate sentences with a locative DP subject argument with and without locative morphology, respectively in Kiwoso.

- (431) a. *duken kuleida waka*
duke- n ku- le- id- a wa-ka
 5shop-LOC 17- PST- enter- FV 2-woman
 ‘Into the shop entered women’
- b. *duka lyileida waka*
duka lyi- le- id- a wa-ka
 5shop 5AGRs-PST-enter- FV 2-woman
 ‘The shop (is the place where) women entered’

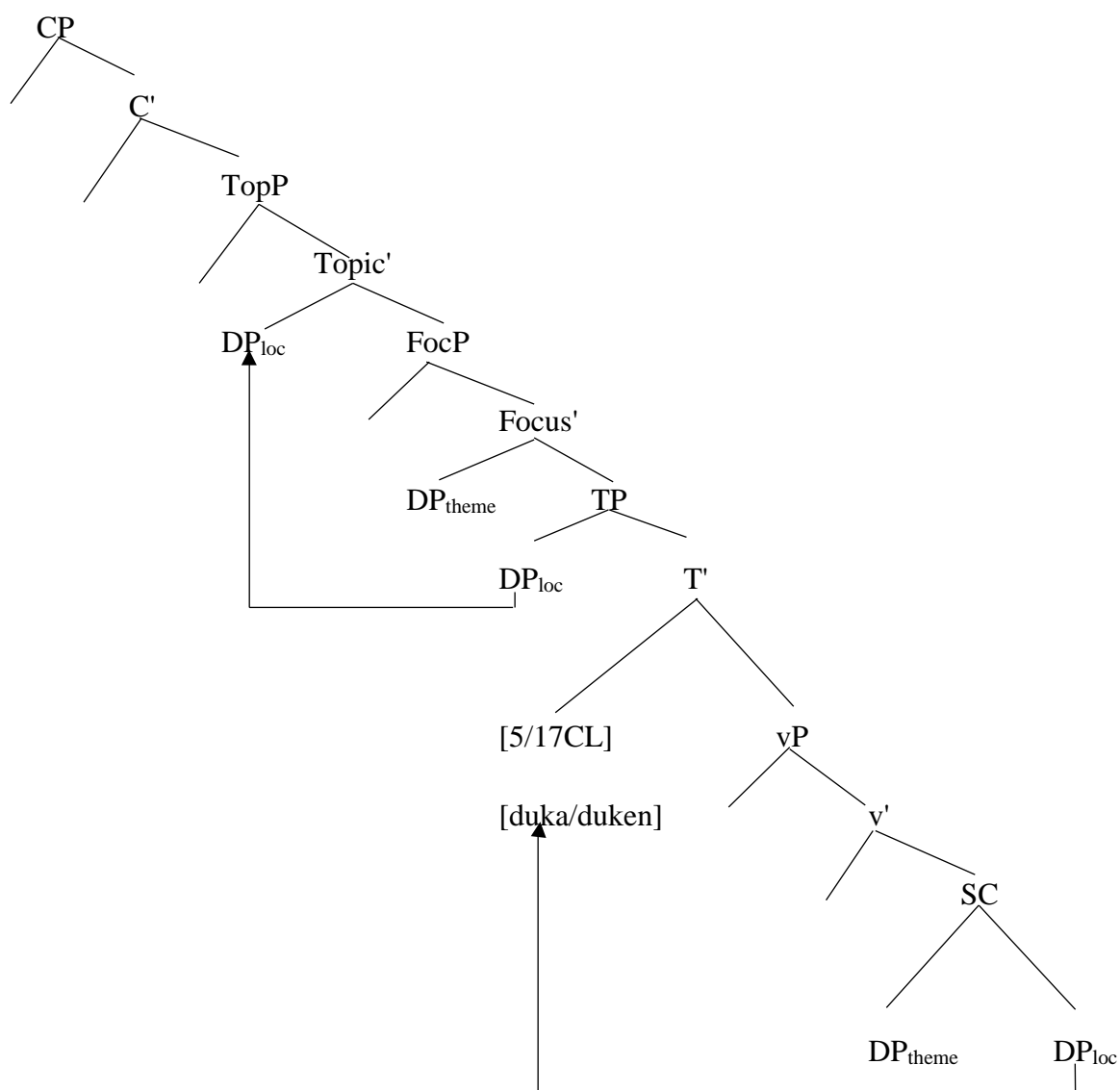


Figure 20: Event decomposition of anticausative sentence with the verb *ida* 'enter' in Kiwoso

Similarly to the agent/theme subject alternates of the sentences exemplified in (428) and represented in figure 19, in the sentences, as in (431), the goal/location subject argument with and without locative morphology, respectively moves into Spec,TP where it receives nominative case and agreement feature (cf. figure 20). It has been shown that in Kiwoso, when locative DP as subject appears with locative morphology *ni-*, the locative prefix *ku-* realizes subject agreement on the verb. On the other hand, when goal/location DP subject is morphologically unmarked, subject-verb agreement is determined by the basic noun of the respective nominal in the preverbal position. However, in Kiwoso, goal/location DPs with and without locative morphology, respectively share a similar interpretation despite different agreement of their subject properties. Therefore, the agreement relation between the locative DP subject (a goal) and the T (a probe) is determined by the morphology of the locative DP that occupies the Spec,TP position.

The sentences in (431) with subject argument with locative morphology (431a) and without locative morphology (431b) yielding the structure in figure 20 represent sentences with the goal/location argument as subject of all verbs discussed in this chapter. Sentences of change of location/position verbs with the goal/location subject argument examined in Kiwoso differ significantly from the anticausative forms of change of state verbs examined in chapter 5. In sentences with change of location/position verbs, the nominal complement such as *waka* ‘women’ in (431a-b) is obligatory. This is not the case with the predicate complements of anticausative sentences of change of state verbs examined in chapter 5. It can be argued that, whereas the nominal complements of the goal/location variants sentences with change of location/position verbs are arguments, and hence obligatory, with change of state verbs they are adjuncts, thus optional. Nevertheless, the underlying abstract structures for theme subject variants of change of state verbs and that of change of position/location verbs are similar in that, in both cases, external arguments are syntactically inexpressible.

The proposed Small Clause analysis of the respective alternates of locative-subject alternation sentences naturally account for the observed properties of the goal/location argument as subject, as well as the postverbal agent/theme argument in Kiwoso. With regard to the locative DP subject, its properties can be attributed to the structural position it occupies and the agreement feature it determines on the verb. On the other hand, the properties of the agent/theme DP, such as its inability to occur in passive sentences and license object agreement is ascribed to the inherent case that it assigns which makes the theme DP inert.

It has been pointed out in chapter 5, section 5.5.2 that the syntactic decomposition approach is appropriate for the analysis of sentences with change of state verbs in Kiwoso. It has been argued that causative alternations of these verbs are base-generated, thus causative and anticausative variants do not stand in derivational relationship. Both variants share a common base, and exhibit a causative meaning, as evidenced in the diagnostics employed. Similarly, motion verbs, verbs of existence and change of state verbs examined in relation to locative-subject alternation constructions in this chapter indicate that neither variant is assumed to be derived from the other. In the first place, both alternates are unmarked, a fact which challenges views on transitive and intransitive approaches to the anticausative alternation (see chapter 3 subsections 3.3.2.1 and 3.3.2.2 for details on derivational approaches). Thus, Kiwoso locative-subject alternation sentences are base-generated, as is also the case with sentences with verbs that participate in causative and anticausative alternation discussed in chapter 5. Therefore, the syntactic decomposition approach employed in this study suits the analysis of verbs that participate in (anti-)causative alternations (i.e. change of state verbs), as well as those verbs occurring in locative-subject alternations (i.e. change of location/position verbs) as the results of this study demonstrate.

Approaches assuming Distributed Morphology allow vP-internal arguments (direct objects) to occur in more than one structural positions in the syntax, and thus makes it possible for these arguments to acquire different interpretation (cf. Alexiadou & Schäfer 2009; Irwin 2012). The findings of the current study give evidence that the roots of change of state, and that of change of location/position contain theme arguments which are internal to the verbs. This argument (i.e. theme) is interpreted as the undergoer of some change. However, the interpretation of the theme arguments found in sentences with change of state verbs examined in chapter 5 differ from those found in locative-subject alternation of change of location/position verbs. The theme arguments of change of state verbs are construed as undergoing the change of state, but the theme argument of change of location/position verbs is simply interpreted as ‘be in a state’. Put differently, the theme of a change of location/position verbs used in the locative-subject alternation constructions is represented as coming into existence with respect to some location (see also Levin & Rappaport Hovav 1995).

Therefore, although the event decomposition of change of state roots and that of a change of location/position roots are similar, they differ in terms of structural configuration due to the syntactic properties and discourse function of their internal arguments (cf. Levin & Rappaport Hovav 1995). It is argued in section 6.7.7 that the theme argument in locative-subject constructions functions as a new discourse referent. In sentences with change of state verbs, only the theme argument of the agent subject variant can function as a new discourse referent. This work has adopted the view that the

theme and locative DPs are in predication relation, and that this relationship is essential for the introduction of a new discourse referent in locative-subject alternation sentences in Kiwoso. The view that the theme argument of theme subject sentences with change of state verbs is not part of the predication cannot introduce a new discourse referent.

6.7.3 Change of location/position verbs and external argument realization in Kiwoso

Scholars (Alexiadou & Schäfer 2006; Alexiadou & Anagnostopoulou 2007) note that subject position can be realized by different thematic roles, namely agent, instrument and causer. This has been evidenced in the change of state verbs examined in Kiwoso discussed in chapter 5 section 5.3 and its subsections. The change of location/position verbs examined in this chapter indicate that in addition to Agent, Instrument and Causer, location arguments such as Goal/Source /Location can also function as subject (i.e. an external argument) of locative-subject alternation sentences.

The subjecthood status of the location arguments has been established through various diagnostics such as its ability to occur in the preverbal structural position as well as controlling agreement on verbs, as examples (354-355) and (371-372) demonstrate. The goal/location argument can occur as subject in passive verb clauses and also appears as a relative clause antecedent, as examples in (356-357) and (373-374), among others illustrate.

The change of location/position verbs examined in relation to locative-subject alternation in Kiwoso give evidence that the anticausative variants are incompatible with *na*-phrase ‘by-phrase’ suggesting that external argument of the sentences with goal/location argument as subject with or without locative morphology, respectively, is syntactically inexpressible because the events they denote are conceptualized as States. However, locative-subject alternation sentences are felicitous with agent-oriented adverbial modification and purpose phrase/clauses. Notice, however, that these modifiers are different in terms of interpretation when they occur with sentences with an agent/theme argument as subject and when they occur with sentences having a goal/location argument as subject. The findings of this study demonstrate that in the canonical sentence alternates, modifications such as agent-oriented adverbial and purpose phrase/clause modify the agent/theme argument, whereas in the constructions with the goal/location subject argument, these modifications describe the event as a whole. It has also been evidenced that locative-subject alternation verbs can occur in sentences with modifiers such as reason phrases/clauses, manner/instrument adjuncts, and causing event modification (see sections 6.2.4.4, 6.3.4.5, 6.4.4.4, 6.5.4.4 and 6.6.4.6). The co-occurrence of such modifications with the sentences having goal/location argument as subject point to the presence of a cause component which gives evidence of the causative meaning in these sentence alternates.

Therefore, it can be argued that, both causative and anticausative variants of change of location/position verbs analyzed in this chapter as is the case with change of state verbs examined in chapter 5 involve causation.

6.7.4 Change of location/position verbs and aspectual verb class semantics

It has been pointed out in the research literature that verbs in natural languages fall into one of the four major aspectual verb classes, namely Stative, Activity, Accomplishment and Achievement (see chapter 3 section 3.7). However, event types represented by lexical verbs are not necessarily the event types of the sentence of such verbs. Smith (1997) asserts that situation types are determined by verb constellation. In fact situation types cannot be determined based on lexical verbs in isolation because syntactic constituents such as temporal adverbials, adjunct phrases, and the type of complement affect the type of situation denoted by the main verb in the constructions. Therefore, for proper categorization, situation types should be compositionally determined.

The semantic verb classes examined in this chapter demonstrate different characteristics in terms of aspectual properties. The findings indicate that whereas manner of motion verbs denote Activity events in their non-derived forms, verbs of directed motion and verbs of spatial configuration are aspectually non-homogenous. Directed motion verbs such as *somuka* ‘exit’ and *ida* ‘enter’ are basically Achievement verbs. The events denoted by these verbs are conceived as instantaneous events with temporal logical endpoints. However, when sentences with these verbs co-occur with durative temporal adverbials they receive an atelic Activity reading, describing events with bounded time expression. For example, sentences such as *waka waleida duken ko masaa adadu* ‘women entered into the shop for three hours’ implies that there was event of women entering the shop for the range of time of three hours. However, such a sentence does not entail if the goal of motion was achieved, thus describing an eventuality without an endpoint. On the other hand, *shaama* ‘ascend’ and *enda* ‘go’ which are also inherently directed verbs of motion denote Activity events and, therefore, they are compatible with both durative and completive adverbials. It has been pointed out in the introduction of this section that there are several factors that affect the situation type of verbs. The constructions of inherently directed motion verbs examined demonstrate that aspectual types of these verbs are also determined by the type of subject and temporal adverbials. It has been shown that *ida* and *somuka* are typically telic Achievement verbs in Kiwoso. However, when the subject DP of the sentence is in plural form, the situation type of these verbs shift into atelic Activity events, thus compatible with both durative and completive adverbials, as (432) exemplifies.

- (432) a. *waka waleida duken(ko masaa adadu)/(masaa adadu)*
waka wa- le- id- a duke- n (ko masaa adadu)/(masaa adadu)
 2-woman 2AGRs-PST-enter- FV 5shop-LOC (for hours three)/ (hours three)
 ‘Women entered into the shop(for three hours)/ (in three hours)’
- b. *duken kuleida waka (ko masaa adadu)/(masaa adadu)*
duke- n ku- le- id- a wa-ka (ko masaa adadu)/(masaa adadu)
 5shop-LOC 17- PST- enter- FV 2-women (for hours three)/ (hours three)
 ‘Into the shop entered women(for three hours)/ (in three hours)’
- c. *duka lyileida waka (ko masaa adadu)/(masaa adadu)*
duka lyi- le- id- a wa-ka (ko masaa adadu)/(masaa adadu)
 5shop 5AGRs-PST- enter- FV 2-women (for hours three)/ (hours three)
 ‘The shop (is the place where) women entered (for three hours)/ (in three hours)’

The example sentences give evidence that situation types can be affected by affixes which create result state or goal of motion interpretation, for instance the applicative suffix in Kiwoso. The findings of this study demonstrate that, manner of motion verbs in Kiwoso do not conflate direction or path of motion. However, when the applicative morpheme is suffixed to these verbs they acquire a path or goal of motion reading. This morpheme shifts the aspectual type of manner of motion verbs from an atelic Activity event into a telic Accomplishment (see section 6.3.5).

6.7.5 The morphosyntax of locative affixes in Kiwoso

It has been pointed out in chapter 2 subsection 2.5.1 that, like generally in Bantu languages, Kiwoso is characterized by a noun class system. The nouns in the class system are distinguished from one another based on noun class prefixes which also determine agreement with modifiers. These classes include the locative nouns which are traditionally assigned classes 16, 17, and 18. However, as pointed out earlier, Kiwoso has lost all Proto-Bantu locative classes although the reflex of class 17 prefix is still productive in agreement patterns of most locative expressions (see also Mallya 2011). Unlike many Bantu languages, the locative prefix *ku-* in Kiwoso cannot be prefixed to ordinary nouns to reclassify them into locative nouns. Instead, ordinary nouns are reclassified into locative nouns by attaching the suffix *ni-*, as illustrated in (433).

(433)	Ordinary nouns	derived nouns with <i>-ni</i>	derived noun with <i>ku-</i>
	<i>duka</i> ‘shop’	<i>duken</i> ‘in/to shop’	* <i>kuduka</i>
	<i>ruko</i> ‘kitchen’	<i>rukun</i> ‘in/at the kitchen’	* <i>kuruko</i>
	<i>muda</i> ‘water’	<i>muden</i> ‘in the water’	* <i>kumuda</i>
	<i>ikari</i> ‘car/bus’	<i>ikarin</i> ‘in the car/bus’	* <i>kuikari</i>

The examples above illustrate that the final vowel of the locative suffix *ni-* in Kiwoso has disappeared and that there is an indication of vowel harmony. In Kiwoso, nouns that are morphologically marked by the locative suffix *-ni*, and inherently locative nouns such as place names, exhibit class 17 (*ku-*) agreement on the verb, as (434) demonstrates.

- (434) a. *rukun ku/(*lyi)fane*
ruko- *n* (*ku*)/(**lyi*)- *fane*
 9kitchen- LOC (17)/(*9)AGRs-dirty
 ‘In (side)/ the kitchen is dirty’
- b. *ruko (lyi)/(*ku)fane*
ruko (**ku*)/(*lyi*)- *fane*
 9kitchen (*17)/(5)- dirty
 ‘The kitchen is dirty’
- (435) *kinaange (ku)/(ki)fane*
kinaange (*ku*)/(*ki*)- *fane*
 7market (17)/(7)- dirty
 ‘In the market is dirty/the market is dirty’

Examples in (434) demonstrate that although Kiwoso has lost the traditional Proto-Bantu locative prefixes, class 17 prefix *ku-* is still productive in subject-verb agreement. The examples also indicate that nouns marked by the locative suffix *ni-*, as in (434a), obligatorily trigger class 17 agreement on the verb. On the other hand, nouns that denote place or location names are morphologically unmarked and, therefore, the agreement on verb can be determined either by class 17 locative prefix or the nominal class prefix of the given noun, as (435) illustrate. However, the derived constructions share

semantic interpretation, as also observed throughout the discussion of locative-subject alternation constructions explored in this chapter.

It has been pointed out that noun class prefixes in Bantu languages form a phonological unit with the root/stem, as such nouns and the prefixes cannot be pronounced in isolation (Bresnan & Mchombo 1995). It has also been shown that the nouns and the prefixes form the morphological unit in that prefixes match the nouns they co-occur with, and determine agreement with other dependent elements. The findings of this study demonstrate that Kiwoso does not employ prefixes in the derivation of locative nouns. However, it can be shown that the locative suffix involved in the formation of locative nouns can be characterized as phonologically and morphologically part of the associated nouns, as illustrated in (436).

(436) Ordinary nouns		locative nouns	
<i>kitara</i>	‘bed’	<i>kitaren</i>	‘on bed’
<i>nlango</i>	‘door’	<i>nlangon</i>	‘at the door’
<i>nungu</i>	‘pot’	<i>nungun</i>	‘in the pot’

Phonologically, the derived locative nouns are pronounced as a single unit; neither the noun nor the suffix can be uttered in isolation in expressing location. Morphologically, the locative suffix in Kiwoso is a bound morpheme, but it is the head of the derived locative noun, hence syntactically independent element. This property has been evidenced in the agreement property of the sentences with goal/location argument as subject discussed throughout this chapter.

6.7.6 Argument Structure

It has been argued from the outset of chapter 1 that only change of state verb and change of location/position verbs are employed in the exploration of argument realization, causation and event semantics in Kiwoso. Change of state verbs discussed in chapter 5, and change of location/position verbs examined in this chapter are characterized as unaccusative phenomenon. The change of state verbs examined in chapter 5, and change of location/position verbs examined in this chapter demonstrate that unaccusative verbs productively participate in causative and anticausative alternation. However, the findings of this study demonstrate that not all change of state verbs exhibit the causative alternation (see the discussion in chapter 5, section 5.2). Similarly to change of state verbs examined in chapter 5, the class of verbs examined in relation to locative-subject alternation constructions in Kiwoso is not homogenous, as shown in the next paragraph.

change of location/position verbs constructions examined in relation to locative-subject alternation in Kiwoso indicate that majority of verbs that participate in this alternation are intransitive verbs, particularly those denoting prototypical unaccusative properties. However, the results of the study give evidence that locative-subject alternation constructions in Kiwoso is not restricted to unaccusative verbs. This study argues that other semantic verb classes such as passive verbs, transitive, and ditransitive, as well as unergative verbs also undergo locative-subject alternation, as examples in (437-439) demonstrate.

(437) *rukun kulekoro kelya* *passive verb transitive*

ruko- n ku- le- kor- o kelya
kitchen-LOC 17- PST- cook-PASS 7food
'In the kitchen was cooked food'

(438) *sandukun kulebhiko kitabu* *passivized ditransitive*

sanduku-n ku- le- bhik-o kitabu
locker-LOC 17- PST- keep- PASS 7book
'In the locker was kept a book'

(439) *nnden kuledemo* *passive unergative*

nnde- n ku- le- dem- o
5field-LOC 17- PST- cultivate-PASS
'In the field was cultivated'

Examples in (437-439) demonstrate that similarly to other Bantu languages, Kiwoso licenses passive transitive and ditransitive verbs, as well as unergative verbs in locative-subject alternation. Generally, it has been established that, among others, ditransitive verbs cannot undergo locative inversion in Kiwoso, as the ungrammaticality of the sentence in (440) demonstrates.

(440) **sandukun kulesuruma kitabu* *passivized ditransitive*

sanduku-n ku- le- surum-a kitabu
locker-LOC 17- PST- hide- FV 7book
'In the locker hid a book'

It has been argued throughout the discussion of locative-subject alternation sentences that subject locative prefix *ku-* in Kiwoso has locative reference and, therefore, it lacks impersonal meaning associated with such prefix in other Bantu languages such as Sesotho (Machobane 1995), Setswana

(Demuth & Mmusi 1997), Chishona (Harford 1990), and Swahili and Zulu (Buell 2007). It has been suggested that languages that show more than one types of locative prefixes in the subject agreement are the only languages that can retain locative reference of the locative prefixes when the locative subject is dropped (Demuth & Mmusi 1997). These authors argue that if a language has one productive locative prefix in agreement, such a prefix lacks a locative semantic feature. The constructions of change of location/position verbs examined in Kiwoso indicate that only one locative prefix appears in subject-verb agreement. It has been established further that this prefix has locative features even when the locative noun is not mentioned (cf. examples 358, 375, 389, 404, and 419). The findings of this study demonstrate that there is no relationship between verbal markers inventories, and the interpretation of locative prefixes, contrary to Demuth and Mmusi's (1997) proposal. In Kiwoso, the locative prefix *ku-* appears as concord marker in the verbal morphology and in all other dependent elements, although it is not inflected in the derivation of locative nouns.

6.7.7 Information Structure

Morphosyntactic alternations such as passive verb constructions, (anti-)causativization, and locative-subject alternation discussed in this chapter are not used in free variation. These operations indicate different information packaging devices of sentences that share similar semantic propositions. Information packaging constructions such as locative-subject alternation deviates from the basic word order, thus achieving a specific information structural effect (cf. Lambrecht 1994; Neeleman & Vermeulen 2012). The distribution of the sentences with agent/theme subject argument and the goal/location subject argument of motion verbs, verbs of existence as well as change of state verbs in Kiwoso discussed in this chapter is mainly determined by discourse context. Pragmatically, locative-subject alternation sentences play the role of presentational focus in that the preverbal locative DP which is interpreted as topic sets the scene in which the postverbal DP which is necessarily the focus of the sentence appear (cf. Chafe 1976; Bresnan & Kanerva 1989; Salzmann 2004). The goal/location subject argument as a topic involves old information that speakers assume to be familiar to the addressees at the time of the utterances. The postverbal DP is a focus introducing new or less familiar information (cf. chapter 1, section 1.9). Generally, in locative-subject alternation, the goal/location argument as subject is topicalized, whereas the postverbal argument DP is focalized, denoting new information expressed by the sentence topic.

The findings of this study have established further that in addition to its presentational focus function, locative-subject alternation constructions can be used in contrastive focus, as (441-442) exemplify.

- (441) a. *wana waleenda shuule che misan*
wa-na wa- le- end- a shuule che misa- n
 2-child 2AGRs-PST- go- FV 9school not 9church-NEG
 ‘Children went to school not to church’
- b. *wana waleenda shuule che wakan*
wa-na wa- le- end- a shuule che wa-ka- n
 2-child 2AGRs-PST- go- FV 9school not 2-woman-NEG
 ‘Children went to school not women’
- (442) a. *shuule kuleenda wana che wakan*
shuule ku- le- end-a wa-na che wa-ka- n
 9school 17- PST- go-FV 2-child not 2-woman-NEG
 ‘To school went children not women’
- b. **shuule kuleenda wana che misan*
shuule ku- le- end- a wa-na che misa- n
 9school 17- PST- go- FV 2-child not 9church-NEG
 ‘*To school went children not to church’

Examples in (441) and (442a) illustrate that in the canonical sentences (with agent/theme subject argument) both the agent/theme and the location arguments can receive contrastive focus. On the other hand, in the goal/location subject argument alternate, only the agent/theme argument can be focused. Goal/location subject argument DPs cannot receive contrastive focus, as the ungrammaticality of the sentence (442b) indicates. Similar results have been reported in other Bantu languages such as Chichewa (Bresnan & Kanerva 1989) and Kinyarwanda (Polinsky 1993).

6.5.8 Summary

This chapter explored locative-subject alternation constructions with various semantic verb classes. Properties of motion verbs, verbs of existence, and change of state verbs in relation to locative-subject alternation sentences are examined in combination with various modifications, namely agentive phrases/clauses, reason clauses, manner/instrument adjuncts, causing event modifier as well as temporal adverbial modification. Additionally, applicative-locative sentences of these verbs are also considered.

The findings of the constructions examined indicate that a range of verbs participate in locative-subject alternation. Considering the verbs employed in the locative-subject alternation in this study, two types of alternations are identified in Kiwoso. There is an alternate in which the subject argument appears with locative morphology. In this alternate the locative DPs that function as subject contain the locative suffix *ni-* and involve locative prefix *ku-* in the subject-verb agreement. The second variant involves sentences of which the locative subject argument are not morphologically marked by the locative suffix, thus the bare noun subject determines the subject agreement on verbs. It has been shown that although the two variants are distinct morphosyntactically, they nevertheless have similar semantic interpretations. As in most languages, locative-subject constructions in Kiwoso serve a pragmatic-discourse function of presentational focus. The goal/location subject argument of the locative-subject alternation constructions is interpreted as a topic (i.e. part of the sentence which is known, familiar, presupposed or shared among interlocutors), whereas the postverbal argument DP (agent/theme argument) of these sentences is understood as focus (i.e. part of the sentence providing information which is usually discourse new in relation to preverbal locative DPs of the goal/location subject alternate of the locative-subject constructions).

The locative-subject alternation sentences examined indicate that a goal/location argument exhibit typical characteristics of canonical subject, as evidenced by the subject diagnostics such as subject-verb agreement, its occurrence as a subject of passive verb and relative verb clauses. On the other hand, the postverbal agent/theme arguments of all verbs examined lack object properties. The findings of the study demonstrate that the goal/location argument as subject in locative-subject alternation sentences in Kiwoso cannot occur in passive verb constructions or appear as object agreement prefix. Sentences with agent/theme argument as subject and constructions with a goal/location subject argument demonstrate that they are all compatible with reason clause and causing event modifiers. This entails that both transitive and intransitive uses of change of location/position verbs examined in this chapter involve a cause component similarly to change of state verbs examined in relation to causative and anticausative uses in chapter 5.

The sentences examined in relation to event semantics indicate that verbs display different properties within and across semantic classes. It has also been shown that the applicative suffix in Kiwoso gives rise to a change of the aspectual types of manner of motion verbs, from an atelic to a telic events reading. Generally, sentences with verbs that accept durative (atelic) and completive (telic) temporal adverbials indicate that both kinds of adverbials can co-occur with both sentences containing agent/theme subject argument as well as those involving a goal/location subject argument with and without locative morphology.

Based on the analyzed locative-subject alternation sentences in Kiwoso, it has been established that non-derivational approaches such as syntactic decomposition approach employed in this study suits to characterize transitive and intransitive uses of motion verbs and verbs of existence. In fact, derivational approaches could not account for the locative-subject alternation of these verbs because neither the transitive (causative) nor the intransitive (anticausative) variant is morphologically marked.

CHAPTER 7

SUMMARY, CONCLUSIONS, AND AREAS FOR FURTHER RESEARCH

7.1 Introduction

This chapter presents a general overview of the study and its major findings and conclusions, and then suggests areas for future research. It specifically provides an overview of the main issues explored in chapters 2, 3 and 4, and summarizing the findings of the example sentences discussed and analyzed in chapters 5 and 6, in relation to the research questions of the study outlined in chapter 1. Lastly, the conclusion is drawn and suggestions for further areas of research in Kiwoso and other related Bantu languages as a whole are offered.

7.2 General overview of the study

This study consists of five (5) core chapters. Chapter 2 provides an outline of the descriptive grammar of Kiwoso. It has been explained that there are ten (10) vowels and twenty two (22) consonants in Kiwoso. It has been pointed out that in Kiwoso, vowel length is contrastive (i.e. the length of a vowel changes the meaning of a word). The discussion in chapter 2 included evidence that as a typical Bantu language, Kiwoso is characterized by noun class system. However, unlike many Bantu languages, the Proto-Bantu locative noun class prefixes *ku-*, *pa-* and *mu-* are not productive in Kiwoso. It has been illustrated, however, that a remnant of the locative noun class 17 prefix *ku-* appears in the agreement system with dependent elements such as subject-verb agreement, adjectives, and possessives. The discussion on the verbal system gives evidence that Kiwoso has both inflectional and derivational verbs. In Kiwoso, a verb can be derived from its basic form, for instance, from monotransitive to intransitive through affixation of verbal suffixes like the passive and stative. On the other hand, the valency of the verb may change from intransitive to monotransitive through affixation of the applicative and causative suffixes. This suggests that, apart from idiosyncratic lexical semantic properties of individual verb roots, verbal argument alternations in Kiwoso are partly determined by morphosyntactic operations such as affixation of verbal suffixes including an applicative, causative, passive, and stative.

Chapter 3 examines three major research areas. In the first part, it explores the previous studies on argument realization and alternations, particularly on the (anti-)causative and related argument alternation constructions such as passive and middle. In the second part, studies on aspectual verb class semantics are examined. It has been demonstrated that aspectual verb class notions, like telicity and the incremental theme, inform the properties of verbs in the realization of arguments. The studies

reviewed illustrate that argument alternation, causation, and aspectual verb class properties are interrelated in accounting for verbal argument alternation properties. It was stated that, limited attention has been given to the linguistic analysis that unifies the three research areas outlined above, particularly in relation to African languages. The present study aimed to bridge this knowledge gap, and to add to the growing body of research on argument realization and alternation constructions particularly the anticausative, passive, and middle alternation constructions in Bantu languages.

With regard to the causative and anticausative alternation, researchers focus on two major issues. Firstly, scholars have explored the similarities and the differences between passive and anticausative alternations and secondly, they have focused on the derivational relationship between the causative variant and its anticausative counterpart. Concerning the passive and the anticausative, studies indicate that the two alternates differ in two major areas, namely modification, control, and verb restrictions. The argument advanced is that passive, unlike the anticausative, contains an implicit external argument which provides access to agentive adverbials, *by*-phrases and control into purpose clauses. The view that the anticausative lacks an implicit external argument has the sequence that agentive modifiers are restricted, and that control into purpose clauses is infelicitous. Regarding verb restrictions, scholars postulate that the passive and anticausative are different in that the former can co-occur with any transitive verbs, whereas the latter is mainly restricted to change of state verbs, and to a relatively small number of non-agentive motion verbs. However, the studies examined give evidence that across languages, verbs exhibit different characteristics in terms of (anti-)causative alternations. It has been demonstrated that there are verbs that lack an anticausative variant in one language, but that the corresponding verbs express anticausative counterparts in another language. (Consider for example the verb *cut*, *draw* and *build* which lack anticausative counterparts in English, but do alternate in Kiwoso). Such occurrences suggest that a class of alternating verbs is not homogenous across or even within individual languages, thus alternation is not exclusively determined by the verbal roots. This study argues that the encyclopaedic lexical semantics of individual verb roots, in combination with other elements in a clause, determine alternations.

Concerning the derivational relationship between the causative and the anticausative counterparts, three competing approaches, namely the transitivity, detransitivization, and the syntactic decomposition approaches have been proposed to account for the relationship. Proponents of the transitivity approach justify their assertion on the basis of languages that mark causative variants, whereas the detransitivization approach is justified in languages that morphosyntactically mark the anticausative alternate (cf. chapter 3, sections 3.3.2.1 and 3.3.2.2, respectively). However, the derivational approaches are challenged in that languages differ substantially in terms of the

morphological realization of the alternation, thus neither the transitive nor intransitive base approaches can account for the existing crosslinguistic morphological variations. For example, Kiwoso change of state and change of location/position verbs examined in relation to (anti-)causative alternations in the present study challenge both the transitive and intransitive approaches since Kiwoso realizes a morphologically marked anticausative alternate, as well as a morphologically unmarked alternate (cf. the discussion in chapters 5 & 6).

The syntactic decomposition approach assumes that both the causative and anticausative variants are base-generated, thus the causative and anticausative variants have a similar event decomposition, but differ in terms of a Voice head, which introduces an external argument. The proponents of this approach postulate that argument alternations such as the causative and anticausative can properly be accounted for by considering three major nodes, namely a Voice, vCAUS and Root, as discussed in chapter 1, section 1.8.1. The present study is guided by the assumptions of this approach in addition to other non-lexicalist perspectives on word formation such as Distributed Morphology (DM), Minimalism, and Cartography. These approaches share the assumption that morphological operations occur after syntactic operations. Thus, the causative and anticausative variants do not stand in derivational relationship.

Chapter 4 reviewed previous research on grammatical relation changing constructions in Bantu languages focusing on passive and stative verb constructions, and locative inversion sentences. The chapter examines passive and stative verb constructions in the earlier and the recent descriptive Bantu grammars. Typological and theoretical studies on locative inversion constructions in different Bantu languages and in English are reviewed in this chapter as well. The studies reviewed demonstrate that passive, stative, and locative inversion constructions, are systematic grammatical relation changing operations in many Bantu languages. These studies give evidence that the subject and object grammatical relations change in a regular manner across Bantu languages.

Chapters 5 and 6 investigate argument alternation constructions in Kiwoso. The former analyzes the properties of change of state verbs in relation to argument realization and (anti-)causative alternations, while the latter examines change of location/position verbs in relation to locative-subject alternations. The major findings of the study are as summarized in the following subsection.

7.3 Summary of the major findings of the study

The present study explores three interrelated issues in Kiwoso morphosyntax and lexical semantics. It addresses the properties of change of state and change of location/position verbs in relation to

argument realization and (anti-)causative alternations. The study was aimed to investigate five specific research questions outlined in chapter 1 (cf. section 1.5) on argument realization, causation and event semantics in Kiwoso. The general findings of this study are as summarized in the following subsections.

7.3.1 Characteristics of Kiwoso change of state and change of location/position verbs in (anti-)causative alternations

With regarding to the properties of Kiwoso change of state and change of location/position verbs in (anti-)causative alternations, the example sentences examined in chapter 5 demonstrate that both externally and internally caused change of state verbs productively alternate in Kiwoso. The findings of the study give evidence that similarly to change of state verbs, change of location/position verbs in Kiwoso participate in causative and anticausative alternation (cf. the discussion in chapter 6). This study demonstrates that in Kiwoso, the participation of verbs in the causative and anticausative alternation is determined by idiosyncratic lexical semantics of individual verb roots regardless of their aspectual verb class semantics.

The Kiwoso constructions analyzed demonstrate that the anticausative variant of externally caused change of state verbs is morphologically marked by the stative morpheme *-ik-* and its respective forms, but the causative counterparts are morphologically unmarked, as evidenced in chapter 5. By contrast, both the causative and anticausative variants of internally caused change of state verbs examined in this study are morphologically unmarked (cf. chapter 5, section 5.3). It was pointed out, however, that similarly to externally caused change of state verbs, internally caused change of state verbs have a causative meaning, as sections 5.4.1.5 and 5.4.1.7 demonstrate. The findings of the study have established that neither the causative nor anticausative alternate of change of location/position verbs are morphologically marked (see example sentences in chapter 6).

The findings of the study support the view that there are two contrastive elements involved in passive, anticausative, and middle constructions. The constructions examined illustrate that passive verb sentences of externally caused change of state verbs realize an implicit external argument through a *na*-phrase, which parallels the English *by*-phrase, as evidenced in chapter 5, sections 5.3.1.3.1, and 5.3.2.3.1, among others. The findings of the study further demonstrate that in Kiwoso, the *na*-phrase is used to introduce arguments such as agents, instruments, and causers which are purely construed as event participants (arguments). On the other hand, the example sentences examined give evidence that anticausative and middle alternations are incompatible with the *na*-phrase, but can freely co-

occur with a *ko*-phrase which introduces event modifiers, as exemplified in sections 5.3.1.2.2, 5.3.1.4, and 5.3.2.2.1, 5.3.2.4, respectively.

7.3.2 The classification of verb roots in relation to aspectual verb class semantics in Kiwoso

The present study examines lexical semantics and aspectual factors that determine the classification of verb roots into semantic and aspectual verb classes. The findings demonstrate that categorization of verb roots into aspectual verb class semantics in Kiwoso is mainly determined by an incremental theme argument. The results of the study demonstrate that when a causative alternate of change of state verbs co-occur with a bare plural object argument, it changes the aspectual value of an atelic Activity event to a telic Accomplishment event (cf. chapter 5, section 5.6). The findings of this study further demonstrate that the grammatical aspect of verbs determines the aspectual classification of verbs in Kiwoso. The change of state verbs examined in this study give evidence that, when causative alternates co-occur with the perfective aspect, an atelic Activity event shifts to a telic Accomplishment event (cf. sections 5.3.1.1.6, 5.3.1.1.7, and 5.3.2.3.5, 5.3.2.3.7).

In relation to change of location/position verbs, the constructions examined give evidence that, similarly to change of state verbs, the classification of change of location/position verbs in Kiwoso is also determined by an incremental theme argument. The findings demonstrate that inherently directed motion verbs such as *ida* ‘enter’ and *somuka* ‘exit’ are basically Achievement verbs. However, when the subject argument of the sentences with these verbs occur in plural form, it changes their aspectual value from a telic Accomplishment event into an atelic Activity event interpretation (cf. section 6.7.4). Furthermore, the findings establish that in Kiwoso, an applicative suffix has an effect on the aspectual property of verbs. The examples examined illustrate that when manner of motion verbs co-occur with an applicative morpheme, it shifts their aspectual class semantics from an atelic Activity verbs into a telic Accomplishment (cf. section 6.3.5).

Generally, the findings of the present study demonstrate that aspectual verb class semantics cannot be determined by the meaning of a lexical verb in isolation; rather, other sentence elements (e.g., grammatical aspect, adverbial modifiers, and other verbal complements) influence the categorization of verb roots into relevant aspectual verb classes.

7.3.3 Kiwoso change of state verbs and the realization of external arguments

This subsection summarizes the findings of the study as regards properties of change of state verbs and change of location/position verbs in relation to the realization of external arguments, including agent, instrument, and causer arguments. The findings of this study demonstrate that the type of an

external argument which change of state and change of location/position verb in Kiwoso can realize is mainly determined by the lexical semantic properties of individual verb roots. The example sentences examined illustrate that verbs which denote human-oriented eventualities can realize an agent and instrument as external arguments, but not causers (cf. section 5.3.2 and 5.3.3). Verbs that do not restrict the description of eventualities to human agent arguments, can realize all various forms of external arguments, as exemplified in chapter 5, and section 5.3.1. The constructions examined give evidence that all forms of external arguments are expressed as Determiner Phrases (DPs) in causative variants, but in passive counterparts, these arguments occur as PPs. The findings of the study have established that change of state verbs in Kiwoso exhibit two different interpretations with regard to instrument arguments as subjects. On the one hand, instruments occur as inherently eventive, and which are understood as independently involved in the event without being manipulated by human agent (cf. section 5.3.1.1.2). Instruments that occur as subject arguments may imply the presence of a human agent. The latter is understood as a manipulator of the specified instrument (see sections 5.3.2.1.1, 5.3.3.1.1, and 5.3.4.1.2). The study further demonstrates that causers as external arguments involving natural forces (e.g., *wind*, *rain*, *sunlight* ...) act independently, and that they are construed as self-energetic, thus functioning in a similar manner as human agent arguments (cf. sections 5.3.1.1.3 and 5.3.4.1.3).

7.3.4 The relationship between the anticausative, passive and middle constructions

The anticausative alternation in Kiwoso is examined in relation to other argument alternation constructions such as the passive and middle verb constructions (cf. chapter 5, section 5.5.4). The findings of the study demonstrate that anticausative, passive, and middle constructions are semantically distinct although they share some morphosyntactic properties. The example sentences analyzed from Kiwoso demonstrate that an external argument of a verb which is generally realized as the subject of the transitive (causative) variant is syntactically absent in the anticausative, passive, and middle alternates. It is further established that anticausative, passive, and middle constructions with externally caused change of state verbs are morphologically marked. However, whereas the passive verb morphology is indicated by the form *-o-*, the anticausative and middle constructions exhibit the morphological suffix *-ik-* (see sections 5.3.1.3.1, 5.3.1.2.2, and 5.3.1.4, respectively). It has been demonstrated that, distinct from the anticausative, middle verb clauses in addition exhibit the habitual morpheme *-a-*, which signifies a generic meaning of middle constructions in Kiwoso. The study illustrate that in Kiwoso, internally caused change of state verbs and change of location/position verbs are morphologically unmarked in both the causative and the anticausative alternates. However, the goal/location subject argument alternate of change of location/position verbs

which occur in passive verb clauses exhibit passive morphology *-o-*, similarly to the passive verb constructions of externally caused change of state verbs.

The findings of the study further demonstrate that anticausative, passive and middle verb sentences vary significantly in relation to their co-occurrence with various kinds of modifications. Considering the diagnostics employed, the results of the study give evidence that passive sentences of externally caused change of state verbs can freely co-occur with agentive phrases/clauses such as the *by*-phrase and agent-oriented adverbials. In addition, the subject arguments can execute control of the subject argument in purpose phrases/clauses. By contrast, agentive modifiers and purpose phrases/clauses modification are incompatible with anticausative and middle verb constructions. These findings suggest that passive verb sentences include an agentive arguments, hence they permits agentive modifiers, and control into purpose clauses. This study has also demonstrated that both passive and anticausative constructions of change of location/position verbs are felicitous with various kinds of agentive and purpose phrases/clauses modifications. However, the findings illustrate that these modifiers function differently in passive and anticausative verb constructions. The example sentences analyzed illustrate that when purpose clause modifications co-occur with passive verb constructions, they modify an external argument. By contrast, an agentive and purpose phrases/clauses modify the event as a whole in anticausative constructions. The constructions examined in this study furthermore give evidence that, although anticausative variants of externally caused change of state verbs do not co-occur with agentive and purpose phrases/clauses, similarly to passive sentences, anticausative constructions can co-occur with a reason phrase/clause and a causing event modification. This study argues that the compatibility of the reason phrase/clause and the causing event modification reflects the presence of a cause component in the anticausative sentences in Kiwoso (cf. subsections 5.2.4.3-5.4.4.3 and 6.2.4.6-6.6.4.6).

Table 32 summarizes the major findings of the general diagnostics employed in the analysis of change of state verbs in relation to argument alternations in Kiwoso. Table 33 provides an outline of findings of location/position verbs in locative-subject alternation constructions in relation to various diagnostics.

Change of state verbs	CAUSATIVE											PASSIVE											ANTICAUSATIVE											MIDDLES							
	DIAGNOSTICS											DIAGNOSTICS											DIAGNOSTICS											DIAGNOSTICS							
	Agent-subject	Instrument-subj	Natural-subject	Agentive-adv	Purpose	Reason	Tem. adj		Causing event	Instrument-adj	Manner-adj	Agent-subject	Instrument-subj	Natural-subject	Agentive-adv	Na- phrase	Purpose	Reason	Tem .adj		Causing event	Instrument-adj	Manner-adj	Agent-subject	Instrument-subj	Natural-subject	Agentive-adv	Ko- phrase	Purpose	Reason	Tem. adj		Causing	Instrument-adj	Manner-adj	Agentive-adv	Purpose	PPs			
For							In	For											In	For											In	Ko						Na			
Break-V																																									
<i>baara</i> 'break'	✓	✓	✓	✓	✓	✓	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	✓	✓	✓	✓	✓	*	✓	*	*	✓	*	✓	*	✓	✓	✓	✓	*	*	✓	*		
<i>saka</i> 'grind'	✓	✓	#	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	*	✓	*	✓	*	✓	✓	✓	✓	*	*	✓	*		
<i>aswo</i> 'crack'	✓	✓	✓	✓	✓	✓	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	✓	✓	✓	✓	✓	*	*	*	*	✓	*	✓	*	✓	✓	✓	✓	*	*	✓	*		
<i>ratuo</i> 'tear'	✓	✓	✓	✓	✓	✓	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	✓	✓	✓	✓	✓	*	*	*	*	✓	*	✓	*	✓	✓	✓	✓	*	*	✓	*		
Cut-V																																									
<i>manya</i> 'cut'	✓	✓	#	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	*	✓	*	✓	✓	✓	✓	✓	✓	✓	*	*	✓	*	
<i>bara</i> 'split'	✓	✓	#	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	*	✓	*	✓	✓	✓	✓	✓	✓	✓	*	*	✓	*	
<i>racha</i> 'slash'	✓	✓	#	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	*	✓	*	✓	✓	✓	✓	✓	✓	✓	*	*	✓	*	
<i>randa</i>	✓	✓	#	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	*	✓	*	✓	✓	✓	✓	✓	✓	✓	*	*	✓	*	

[illegible]

<i>wara</i> 'blossom'	*	*	*																					*	*	*	*	✓	*	✓	✓	?	✓	*	✓				
<i>naa</i> 'wither'	*	*	*																					*	*	*	*	✓	*	✓	?	✓	✓	*	✓				
<i>boo</i> 'decay'	*	*	*																					*	*	*	*	✓	*	✓	*	*	✓	*	✓				
<i>buluka</i> 'blister'	*	*	*																					*	*	*	*	✓	*	✓	✓	✓	✓	*	✓				
<i>shimba</i> 'swell'	*	*	*																					*	*	*	*	✓	*	✓	*	*	✓	*	✓				

Table 32: Summary of change of state verbs in Kiwoso with various modifiers

Change of loc/pos- verbs in Kiwoso	Loc-subj alternation				Properties of change of location/position in locative-subject alternation																															
					Subj.properties of goal/location argument					Obj.prope rties of agent/the me		Agent -adv		By- phras e		Purpo se		Reaso n		Causi ng		Mann er		Instru ment		Temporal-adj						Appl				
	Ag-subj	Theme-subj	DP ₊ loc	DP _{loc}	S-V Agr	Subj-passiv	Passive-V	Relative-V	Expletive	Obj-agr	Subj-passive	DP ₊ loc	DP _{loc}	DP ₊ loc	DP _{loc}	DP ₊ loc	DP _{loc}	DP ₊ loc	DP _{loc}	DP ₊ loc	DP _{loc}	DP ₊ loc	DP _{loc}	DP ₊ loc	DP _{loc}	DP-theme		DP ₊ loc		DP _{loc}		DP ₊ loc	DP _{loc}			
ᑭ																										I	ᑭ	I	ᑭ	I						
<i>ida</i> 'enter'	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	✓	*	✓	*	✓	*	*		
<i>enda</i> 'go'	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*		
<i>shaama</i> 'ascend'	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*			
<i>somuka</i> 'exit'	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	✓	*	✓	*	✓	*	*		
Manner																																				
<i>dicha</i> 'run'	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>tola</i> 'jump'	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>fina</i> 'dance'	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>birimika</i> 'roll'	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Existence																																				

<i>kaa</i> 'live'	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	*	*	*	*	*	*
<i>baki</i> 'remain'	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	?	✓	?	✓	?	*	*
<i>bheda</i> 'wait'	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	*	*	*	*
Spat-Conf.																																	
<i>damya</i> 'sit'	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*
<i>oroka</i> 'stand'	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*
<i>masa</i> 'hang'	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*
<i>ongoma</i> 'bend'	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*
State-V																																	
<i>kora</i> 'cook'	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>tana</i> 'build'	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>soma</i> 'read'	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>lya</i> 'eat'	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	✓	✓	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Table 33: Summary of change of location/position verbs in Kiwoso with various modifiers

7.4 Concluding remarks

Over the past two decades, various theoretical and typological studies have been concerned on the interaction and interdependency of argument realization, causation and event semantics. Research of this nature results in a deeper understanding of the interaction between lexicon and syntax, on the one hand, and lexical semantics and syntax-semantics, on the other. This line of research thus provides an understanding of the interface and interaction between morphosyntax and lexical-semantics components.

Research on verb classes and argument alternations has resulted in views about common syntactic properties of verbs with common semantic characteristics, which points to the existence of some kind of generalization about the correlation between verb classes and syntactic structure. In various theories of grammar, it is assumed that argument alternation is to a large extent determined by the lexical properties of a verb. The constructions examined in relation to argument alternations in Kiwoso demonstrate that properties of individual verbs, that is, the idiosyncratic behavior of verbs, play an important role in the syntactic realization and alternation of arguments. This study has also established that in addition to lexical properties, a verb in relation to the event it denotes influences realization of argument and alternations. Given the findings of this study, it can be concluded that syntactic structures are actually event structures, for that reason, verb meaning is compositionally determined in the syntax.

The causative alternation in languages is a research area which has been studied widely across languages. Research in this area led to the emergence of competing theoretical frameworks particularly with regard to the derivational relationship between the causative (transitive) and the anticausative (intransitive) variants. Kiwoso example sentences of change of state and change of location/position verbs examined in this study demonstrate that syntactic decomposition approach is most adequate in the account of (anti-)causative alternations in Kiwoso. The Kiwoso constructions analyzed pose challenges to the causativization and the detransitivization approaches that take one variant to be derived from the other. On the one hand, the causativization approach faces problems for the reason that, in Kiwoso, it is the anticausative variant which is morphologically marked, not the causative alternate. On the other hand, the detransitivization approach would be able to account for only some of the example sentences examined in this study. For example, the detransitivization approach would probably account for the externally caused change of state verbs, but would be inadequate to present explanation regarding internally caused change of state verbs and change of location/position verbs which are morphologically unmarked in both their causative and anticausative uses in Kiwoso.

The change of state and change of location/position verb constructions examined in Kiwoso demonstrate that these verbs have similar syntactic properties, such as verbal argument realization and properties of argument alternations. This implies that change of state and change of location/position verbs are semantically related in that they entail resultant state interpretations, thus forming a class of alternating verbs in Kiwoso. However, the findings of the study further demonstrate that the class of alternating verbs in Kiwoso is not homogeneous. The constructions examined give evidence that the encyclopedic lexical semantics of individual verbs determines the properties of argument alternation in Kiwoso. Given the findings of this study, it can be concluded that in Kiwoso (as is also the case in many languages), verbs that exhibit unaccusative syntax, productively participate in the causative and anticausative alternation.

The verbs of change of state and change of location/position analyzed in combination with various modifications in Kiwoso demonstrate that semantic and pragmatic factors, rather than syntactic properties of verbs, determine the nature of the events that can be expressed by these verbs, and the type of an external argument that can bring about the eventualities described by these verbs. The example sentences examined illustrate that there are events which occur due to an external cause (i.e. externally caused events), while others occur due to the inherent properties of verbs describing such events (i.e. internally caused events). In addition, there are verbs which describe events particular to human (human-oriented eventualities), whereas others denote events which are non-human-driven activities. Patterns of behavior like this are purely semantics and cannot be accounted for or understood on the basis of syntactic properties of individual verbs.

Although the class of alternating verbs examined in this study exhibit similar properties in terms of argument realizations and alternations, neither change of state nor change of location/position verbs behave identically in terms of aspectual properties. A single verb displays distinct aspectual behavior when used in causative and anticausative sentences. Besides, other elements of sentences such as the definiteness of an object and the number (i.e. plural or singular) determine aspectual classes of verbs. This suggests that syntactic structures and event structures are interdependent, and that the meaning of verbs such as change of state and change of location/position verbs examined in this study are compositionally built in the syntax.

There is a general consensus in the linguistic that, across languages, verbs are associated with a specific number of arguments which are accordingly assigned specific thematic roles. However, there are some morpho-lexical operations such as passive, anticausative, and middle verb constructions which alter the predicate argument structure, as evidenced in this study. Moreover, there is general

agreement among linguists that, the link between arguments and theta-roles has an implication for the semantic classification of verbs. Therefore, since a verb meaning determines the number of arguments and their respective theta-roles, the structural properties of the argument realization associated with the verb meaning is central in categorizing verbs into semantic classes.

Indeed, across languages verbs are categorized according to their syntactic and semantic properties such as argument realization and an ability to participate in argument alternations. This categorization is essential in capturing patterns of a shared verb behavior such as the realization of arguments and their interpretations. The phenomenon of verb classes is also pervasive in exploring and understanding how the verb lexicon is organized, and in identifying elements of meaning which are grammatically relevant. The possibility to identify the meaning component specific to individual verbs is essential in any study of lexical-semantics and syntax interfaces. Evidence drawn from the example sentences analyzed in the present study suggests that categorization of verbs into semantic classes is to a considerable extent relevant to particularly studies concerned with the lexical semantics and syntax interface.

The present study demonstrates that the semantic classes of change of state and change of location/position verbs used in different verbal alternations (i.e. anticausative, passive, and middle constructions) in Kiwoso have different syntactic structures although they share the main property, namely that they do not express an external argument (i.e. subject argument). This study has given evidence that verbs belonging to similar semantic classes exhibit varied properties in relation to the diagnostics employed for establishing aspectual verb class. However, the findings concerning the example sentences examined demonstrate that change of state verbs, particularly externally caused change of state verbs, and change of location/position verbs, especially manner of motion verbs and verbs of inherently directed motion, productively alternate. The constructions examined illustrate that non-alternating verbs in languages such as English (e.g., *cut*, *destroy*, *build*, *draw* ...) do alternate in Kiwoso. This can be attributed to cross-linguistic variations and/or idiosyncratic aspect of the verb root.

Although proposals for classifying verbs into semantic classes has been fruitful to the study of lexical semantics and syntax interfaces, this approach is restricted by the fact that it is difficult to identify the size of semantic verb class members, a problem which pose a challenge regarding multiple class membership. For instance, in Kiwoso the verb *randa* ‘saw’ encompasses the meaning of ‘split’, hence two verbs which are found in two different semantic verb classes. Multiple class membership can be

problematic for the reason that it poses challenges in characterizing particular verbs, especially when these verbs are used out of context.

7.5 Areas for further research

This study set out to examine argument realization, causation and event semantics of change of state and change of location/position verbs in Kiwoso by invoking the syntactic decomposition approach and other related frameworks. The results of this investigation demonstrate that the study of cognitive concepts like causation and its interrelated faces is typologically and theoretically multifaceted within and across languages. The present study has only focused on the change of state and change of location/position verbs in one Bantu language, namely Kiwoso. It would be interesting, therefore, to extend the findings of this research to other Bantu languages, and also to non-Bantu African languages in order to enhance knowledge and understanding on the linguistic expression of causation and argument alternations in African linguistics. Given the scope and limitation of the present study, there is a need to study these phenomena in relation to other semantic verb classes in order to explore properties of causative and anticausative alternation and argument realization of different semantic verb classes in Kiwoso. The study of this nature will deepen our understanding of lexical semantics, and the contribution of semantic verb classes to the study of syntax and lexical semantics interfaces, particularly for African languages.

REFERENCES

- Aboh, E. et al., 2010. DP-internal information structure. *Lingua*, 120, pp.782–801.
- Ackema, P. & Schoorlemmer, M., 1994. The middle construction and the syntax-semantics interface. *Lingua*, 93, pp.59–90.
- Ackerman, F. & Moore, J., 2001. *Proto-properties and grammatical encoding: A correspondence theory of argument selection*, Stanford: CSLI Publications, Center for the Study of Languages and Information, Stanford University.
- Ackerman, F. & Moore, J., 1999. “Telic entity” as a proto-property of lexical predicates. In *Proceedings of the LFG99 Conference*. Stanford: CSLI Publications, Center for the Study of Languages and Information, Stanford University.
- Alexiadou, A., 2010. On the morphosyntax of (anti)causative verbs. In M. Rappaport Hovav, E. Dorin, & I. Sichel, eds. *Lexical semantics, syntax, and event structure*. Oxford: Oxford University Press, pp. 177–203.
- Alexiadou, A., 2014. The problem with internally caused change-of-state verbs. *Linguistics*, 52, pp.879–910.
- Alexiadou, A. & Anagnostopoulou, E., 2009. Agent, causer and instrument PPs in Greek: implications for verbal structure. *MIT Working Papers in Linguistics*, 57, pp.1–16.
- Alexiadou, A. & Anagnostopoulou, E., 2004. Voice morphology in the causative-inchoative alternation: Evidence for a non-unified structural analysis of unaccusatives. In A. Alexiadou, E. Anagnostopoulou, & M. Everaert, eds. *The unaccusativity puzzle: explorations of the syntax-lexicon interface*. Oxford: Oxford University Press, pp. 114–136.
- Alexiadou, A., Anagnostopoulou, E. & Schäfer, F., 2015. *External arguments in transitivity alternations: A layering approach*, Oxford: Oxford University Press.
- Alexiadou, A., Anagnostopoulou, E. & Schäfer, F., 2006. The properties of anticausatives crosslinguistically. In M. Frascarelli, ed. *Phases of interpretation*. Berlin: Mouton de Gruyter.
- Alexiadou, A. & Doron, E., 2012. The syntactic construction of two non-active voices: passive and middle. *Linguistics*, 48, pp.1–34.
- Alexiadou, A. & Schäfer, F., 2006. Instrument subjects are agents or causers. In D. Baumer, D. Montero, & M. Scanlon, eds. *25th West Coast Conference on Formal Linguistics*. Somerville: MA: Cascadilla Proceedings Project, pp. 40–48.
- Alsina, A., 1992. On the argument structure of causatives. *Linguistic Inquiry*, 23(4), pp.517–556.
- Alsina, A. & Mchombo, S., 1989. Object asymmetries in the Chichewa applicative construction. In S. Mchombo, ed. *Theoretical Aspects of Bantu Grammar*. Stanford: CA: CSLI Publications,

Lecture notes No.38.

- Ameka, F. & Essegbey, J., 2013. Serialising languages: satellite-framed, verb-framed or neither. *Ghana Journal of Linguistics*, 2(1), pp.19–38.
- Anyanwu, R.J., 2010. *Tense, aspect, and mood in Benue-Congo languages*, Koln: Rudiger Kopper Verlag.
- Asheli, N., 2013. *A grammatical sketch of Shinyiha*, Dar es Salaam: LOT Publications: Grammar Series No3.
- Ashton, E.O. et al., 1954. *A Luganda grammar*, London: Longmans, Green & Co.
- Ashton, E.O., 1944. *Swahili grammar (including intonation)*, London, New York: Longmans, Green & Co.
- Baker, M.C., 1985. The mirror principle and morphosyntactic explanation. *Linguistic Inquiry*, 16(3), pp.373–415.
- Baker, M.C., 2013. Agreement and Case. In M. Den Dikken, ed. *The Cambridge Handbook of Generative Syntax*. Cambridge: Cambridge University Press, pp. 607–654.
- Baker, M.C., 1988. *Incorporation: A theory of grammatical function changing*, Chicago: University of Chicago Press.
- Baker, M.C., 1979. Syntactic theory and the projection principle. *Linguistic Inquiry*, 10, pp.533–581.
- Baumbach, E., 1987. *Analytical Tsonga grammar*, Pretoria: University of South Africa.
- Beavers, J. & Koontz-Garboden, A., 2013. In defense of the reflexivization analysis of anticausativization. *Lingua*, 131, pp.199–216.
- Beavers, J., Levin, B. & Wei Tham, S., 2010. The typology of motion expression revisited. *Journal of Linguistics*, 46, pp.331–377.
- Belletti, A. & Rizzi, L., 1988. Psych-verbs and theta-theory. *Natural Language and Linguistic Theory*, 6, pp.291–352.
- Bentley, M. & Kulemeka, A., 2001. *Chichewa*, Munich: Lincom Europa.
- Besha, R., 1989. Mood in Bantu languages: An exemplification from Shambala. *IILCAA, Vol.5. Studies in Tanzanian Languages*.
- Bittner, M., 1999. Concealed causatives. *Natural Language Semantics*, 7(1), pp.1–78.
- Bleek, W.H.I., 1862. *A comparative grammar of South African languages: Part 1*, Cape town: J.C.Juta & Truber.
- Bleek, W.H.I., 1869. *A comparative grammar of South African languages: Part 2*, London: Truber & Co.
- Bobaljik, J., 2012. *Universals in comparative morphology*, Cambridge: MA: MIT Press.
- Borer, H., 2005. *The normal course of events*, Oxford, New York: Oxford University Press.

- Borer, H., 1994. The projection of argument: Functional projections. In E. Benedictor & J. Runner, eds. *Occational Papers 17*. Amherst: University of Massachusetts Graduate Students Linguistic Association, pp. 19–47.
- Bowers, J., 1993. The syntax of predication. *Linguistic Inquiry*, 24, pp.591–656.
- Bresnan, J., 1990. *Levels of representation in locative inversion: A comparison of English and Chichewa*. M.A dissertation, University of Stanford, California.
- Bresnan, J., 2001. *Lexical functional syntax*, Oxford: Blackwell Publishers.
- Bresnan, J., 1994. Locative inversion and the architecture of universal grammar. *Language*, 70(1), pp.72–131.
- Bresnan, J. & Kanerva, J., 1989. Locative inversion in Chichewa: A case study of factorization in grammar. *Linguistic Inquiry*, 20(1), pp.1–50.
- Bresnan, J. & Mchombo, S., 1995. The lexical integrity principle: evidence from Bantu. *Natural Language and Linguistic Theory*, 13, pp.181–254.
- Bresnan, J. & Mchombo, S., 1987. Topic, pronoun, and agreement in Chichewa. *Language*, 63, pp.741–782.
- Bresnan, J. & Moshi, L., 1990. Object asymmetries in comparative Bantu syntax. *Linguistic Inquiry*, 21, pp.147–185.
- Bresnan, J. & Moshi, L., 1993. Object asymmetry in comparative Bantu syntax. In S. Mchombo, ed. *Theoretical Aspects of Bantu Grammar*. Stanford: CA: CSLI Publications, pp. 47–91.
- Bresnan, J. & Zaenen, A., 1990. Deep unaccusativity in LFG. In K. Dziwirek, P. Farrell, & E. Mejias-Bikandi, eds. *Grammatical relations: A cross-theoretical perspective*. Stanford: CA: CSLI, pp. 45–57.
- Brousseau, A.-M. & Ritter, E., 1991. A unified analysis of agentive verbs. In D. Bates, ed. *Proceedings of the 10th West Coast Conference on Formal Linguistics*. Stanford: CA: CSLI, pp. 53–64.
- Buell, L., 2007. Semantic and Formal Locatives: Implications for the Bantu Locative Inversion Typology. , 15, pp.105–120.
- Burzio, L., 1986. *Italian syntax: a government-binding approach*, Dordrecht: Reidel.
- Carnie, A., 2013. *Syntax: a generative introduction* third edit., Chichester, West Sussex, UK: Wiley-Blackwell.
- Carstens, V., 1997. Empty nouns in Bantu locatives. *Linguistic Review*, 14, pp.361–410.
- Carter, R., 1976. Some constraints on possible words. *Semantikos*, 1, pp.27–66.
- Chafe, W., 1976. Givenness, contrastiveness, definiteness, subjects, topics and point of view. In L. Charles, ed. *Subject and topic*. New York: Academic Press, pp. 25–56.

- Chierchia, G., 2004. A semantics for unaccusatives and its syntactic consequences. In A. Alexiadou, E. Anagnostopoulou, & M. Everaert, eds. *The unaccusativity puzzle: explorations of the syntax-lexicon interface*. Oxford: Oxford University Press, pp. 22–59.
- Chomsky, N., 2001. Derivation by phase. In M. Kenstowics, ed. *Ken Hale: a life in language*. Cambridge: MA: MIT Press, pp. 1–52.
- Chomsky, N., 1981. *Lectures on government and binding*, Dordrecht: The Netherlands: Foris Publications.
- Chomsky, N., 2000. Minimalist inquiries: The framework. In R. Martin, D. Michaels, & J. Uriagereka, eds. *Step by step: Essays on minimalist syntax in honour of Howard Lasnik*. Cambridge: MA: MIT Press, pp. 89–155.
- Chomsky, N., 1995. *The Minimalist Program*, Cambridge: MA: MIT Press.
- Cinque, G., 1999. *Adverbs and functional heads: a cross-linguistic perspectives*, New York: Oxford University Press.
- Cinque, G., 2002. *Functional structures in DP and IP. The cartography of syntactic structures* Volume 1., New York: Oxford University Press.
- Cinque, G. & Rizzi, L., 2008. The cartography of syntactic structures. *Studies in Linguistics*, 2, pp.42–58.
- Cohen, L., Manion, L. & Morrison, K., 2000. *Research methods in education*, New York: RoutledgeFarmer.
- Cole, D., 1955. *An introduction to Tswana grammar*, London, New York: Longmans, Green & Co.
- Comrie, B., 1976. *Aspect*, Cambridge: Cambridge University Press.
- Crotty, M., 1998. *The foundation of social research: meaning and perspective in the research process*, London: Sage Publications.
- Davis, A., 2001. *Linking by types in the hierarchical lexicon*, Stanford: CA: CSLI Publications.
- Davis, A. & Koenig, J.-P., 2000. Linking as constraints on word classes in a hierarchical lexicon. *Language*, 76, pp.56–91.
- Deen, K.U., 2005. *The acquisition of Swahili*, Amsterdam: John Benjamins.
- DeLancey, S., 1984. Notes on agentivity and causation. *Studies in Language*, 8(2), pp.181–213.
- Demuth, K., 1990. Locatives, impersonals and expletives in Sesotho. *The Linguistic Review*, 7, pp.233–249.
- Demuth, K. & Mmusi, S., 1997. Presentational focus and thematic structure in comparative Bantu. *African Languages and Linguistics*, 18, pp.1–19.
- Dixon, R., 1979. Ergativity. *Language*, 55, pp.59–138.
- Doke, C., 1943. *Outline grammar of Bantu*, Grahamstown, South Africa: Department of African

languages, Rhodes University.

- Doke, C., 1945. *Text-book of Zulu grammar* fourth edit., London, New York: Longmans, Green & Co.
- Doke, C. & Mofokeng, M., 1957. *Textbook of Southern Sotho grammar*, London, New York: Longmans, Green & Co.
- Dornyei, Z., 2007. *Research methods in applied linguistics*, London: Oxford University Press.
- Doron, E., 2003. Agency and Voice: The semantics of the Semitic templates. *Natural Language Semantics*, 11(1), pp.1–67.
- Dowty, D., 1989. On the semantic content of the notion thematic role. In G. Chierchia, B. Partee, & R. Turner, eds. *Properties, types and meaning*. Dordrecht: Kluwer Academic Publishers, pp. 69–129.
- Dowty, D., 1986. The effects of aspectual class on the temporal structure of discourse: Semantics or pragmatics? *Linguistics and Philosophy*, 5, pp.23–33.
- Dowty, D., 1991. Thematic proto-roles and argument selection. *Language*, 67(3), pp.547–619.
- Dowty, D., 1977. Towards a semantic analysis of verb aspect and the English “imperfective” progressive. *Linguistics and Philosophy*, 1, pp.45–77.
- Dowty, D., 1979. *Word meaning and Montague grammar - the semantics of verbs and times in generative semantics and in Montague’s PTQ*, Dordrecht: The Netherlands: Riedel.
- Dubinsky, S. & Simango, S., 1996. Passive and stative in Chichewa: evidence for modular distinctions in grammar. *Language*, 72, pp.749–781.
- Embick, D., 2010. *Localism versus globalism in morphology and phonology*, Cambridge: MIT Press.
- Embick, D., 2015. *The morpheme: a theoretical introduction*, Berlin: De Gruyter Mouton.
- Embick, D., 2004. Unaccusative syntax and alternation. In A. Alexiadou, E. Anagnostopoulou, & M. Everaert, eds. *The unaccusativity puzzle: explorations of the syntax-lexicon interface*. Oxford, pp. 137–158.
- Embick, D., 1997. Voice and the interfaces of syntax. Ph.D dissertation, Pennsylvania University.
- Embick, D., 1998. Voice system and the syntax/morphology interface. *MIT Working Papers in Linguistics*, 32, pp.41-72.
- Embick, D. & Noyer, R., 2007. Distributed morphology and the syntax-morphology interface. In G. Ramchand & C. Reiss, eds. *The Oxford handbook of linguistic interfaces*. Oxford: Oxford University Press, pp. 289–324.
- Erteschik-Shir, N., 2007. *Information structure: the syntax-discourse interface*, Oxford: Oxford University Press.
- Fernando, M., 2010. *Morphology and syntax of the Kikongo verbal affixes*, LAP: Lambert Academic

Publications.

- Fernando, M., 2013. *The causative and anticausative alternation in Kikongo (Kizombo)*. Ph.D dissertation, Stellenbosch University.
- Fernando, M., 2015. The locative-subject alternation of VIDMs and the notion of causation in Kikongo (Kizombo). In B. Ekanjume-Ilongo, C. Dunton, & A. Hala-hala, eds. *Recent developments in African linguistics and Literature: A florilegium for Francina Moloi*. USA: David Publishing Company, pp. 1–37.
- Fillmore, C., 1968. The Case for Case. In E. Bach & R. Harms, eds. *Universals in Linguistic Theory*. New York: Holt, Rinehart and Winston, pp. 1–88.
- Foley, W. & Van Valin, R., 1984. *Functional syntax and universal grammar*, Cambridge: Cambridge University Press.
- Folli, R., 2014. Causatives and inchoatives in the lexicon and in the syntax: evidence from Italian. In B. Copley & F. Martin, eds. *Causation in grammatical structures*. Oxford: Oxford University Press, pp. 351–371.
- Folli, R., 2003. *Constructing telicity in English and Italian*. Ph.D dissertation, University of Oxford.
- Folli, R. & Harley, H., 2005. Flavors of v: Consuming results in Italian and English. In P. Kempchinsky & R. Slabakova, eds. *Aspectual Inquiries*. Dordrecht, The Netherlands: Springer, pp. 95–120.
- Fortune, G., 1955. *An analytical grammar of Shona*, London, New York: Longmans, Green & Co.
- Fortune, G., 1957. *Elements of Shona (Zezuru dialects)*, London, New York: Longmans, Green & Co.
- Fortune, G., 1980. *Shona grammatical constructions* Volume 1., Harare: Mercury Press.
- van Gelderen, E., 2013. *Clause structure*, Cambridge: Cambridge University Press.
- Givon, T., 1979. *On understanding grammar*, New York: Academic Press.
- Givon, T., 1984. *Syntax: a functional-typological introduction*, Amsterdam; Philadelphia: J. Benjamins Pub. Co.
- Good, J., 2005. Reconstructing morpheme order in Bantu: The case of causativization and applicativization. *Diachronica*, 22, pp.3–57.
- Good, J., 2007. Strong linearity and the typology of templates. In M. Miestamo & B. Waelchli, eds. *New challenges in typology: Broadening the horizons and redefining the foundations*. Berlin: Mouton de Gruyter, pp. 1–23.
- Grimshaw, J., 1990. *Argument structure*, Cambridge: MA: MIT Press.
- Grimshaw, J., 1982. On the lexical representation of Romance reflexive clitics. In J. Bresnan, ed. *The Mental Representation of Grammatical Relations*. Cambridge: MA: MIT Press, pp.87-148.

- Gruber, J., 1965. *Studies in lexical relations*. Ph.D dissertation, Massachusetts Institute of Technology.
- Gruber, J., 2001. Thematic relations in syntax. In M. Baltin & C. Collins, eds. *The handbook of contemporary syntactic theory*. Malden, Mass: Blackwell Publishers, pp. 257–298.
- Guthrie, M., 1962. On the status of radical extensions in Bantu languages. *Journal of African Languages*, 1, pp.202–220.
- Habibu, M., 2013. *Michakato ya kifonolojia katika lugha ya Kiw'oso*. M.A dissertation, University of Dar es Salaam.
- Haegeman, L., 1997. Elements of grammar. In L. Haegeman, ed. *Elements of grammar: handbook of generative syntax*. Dordrecht: Kluwer Academic Publishers, pp. 1–72.
- Haegeman, L., 1991. *Introduction to government and binding theory*, Oxford: Blackwell Publishing.
- Hale, K. & Keyser, J., 1986. Some Transitivity Alternations in English. *MIT Working Papers in Linguistics*, pp.605–638.
- Hale, K. & Keyser, S.J., 1987. A View from the Middle. *Lexicon Project Working Papers*, 10, pp.1–36.
- Hale, K. & Keyser, S.J., 2002. *Prolegomenon to a theory of argument structure*, Cambridge: MIT Press.
- Hall, B., 1965. *Subject and Object in English*. Ph.D dissertation, Massachusetts Institute of Technology.
- Halle, M. & Marantz, A., 1993. Distributed Morphology and the pieces of inflection. In K. Hale & S. J. Keyser, eds. *The view from building 20: Essays in linguistics in honor of Sylvain Bromberger*. Cambridge: The MIT Press, pp. 111–176.
- Halle, M. & Marantz, A., 1994. Some key features of distributed morphology. In A. Carnie, H. Harley, and T. Bures (eds.), *Papers on Phonology and Morphology*, *MIT Working Papers in Linguistics*, 21, pp.275–288.
- Halliday, M.A., 1967. Notes on transitivity and theme: Part 2. *Journal of Linguistics*, (3), pp.199–244.
- Harford, C., 1990. Locative inversion in Chishona. In J. Hutchison & V. Manfred, eds. *Current approaches to African Linguistics*. Dordrecht: Foris, pp. 137–144.
- Harley, H., 2009. Compounding in distributed morphology. In R. Lieber & P. Stekauer, eds. *The Oxford handbook of compounding*. Oxford: Oxford University Press, pp. 129–144.
- Harley, H., 1995. *Subjects, events and licensing*. Ph.D dissertation, Massachusetts Institute of Technology.
- Harley, H. & Noyer, R., 2000. Formal vs. encyclopedic properties of vocabulary: evidence from

- nominalization. In B. Peeters, ed. *The lexicon-encyclopedia interface*. Amsterdam: Elsevier Press, pp. 349–374.
- Harley, H. & Noyer, R., 1999. State-of-the-Article: Distributed Morphology. *GLOT International*, 4(4), pp.3–9.
- Hartmann, J. & Winkler, S., 2013. Investigating the role of information structure triggers (editorial). *Lingua*, (136), pp.1–15.
- Haspelmath, M., 1993. More on the typology of inchoative/causative verb alternations. In B. and P. M. Camrie, ed. *Causatives and transitivity*. Amsterdam: John Benjamins, pp. 87–120.
- Hoekstra, T. & Mulder, R., 1990. Unergative as copular verbs: locational and existential predication. *The Linguistic Review*, 7, pp.1–79.
- Hornstein, N., Nunes, J. & Grohmann, K., 2005. *Understanding minimalism*, Cambridge: Cambridge University Press.
- Horvath, J. & Siloni, T., 2011. Anticausatives: Against reflexivization. *Lingua*, 121(15), pp.2176–2186.
- Hovav, M.R., 2014. Lexical content and context: The causative alternation in English revisited. *Lingua*, 141, pp.8–29.
- Hyman, L.M., 2007. Niger-Congo Verb Extensions : Overview and discussion. In D. Payne, J. Peña (eds.), *Selected Proceedings of the 37th Annual Conference of African Linguistics*. Somerville, MA: Cascadilla Proceedings Project, pp.149–163.
- Hyman, L.M., 2003a. Suffix ordering in Bantu: A morphocentric Approach. In G. Booij & J. van Marle, eds. *Yearbook of morphology 2002*. Dordrecht: Kluwer Academic Publishers, pp. 245–281.
- Hyman, L.M., 2003b. Segmental phonology. In D. Nurse & G. Philippson, eds. *The Bantu languages*. London: Routledge, pp. 42–58.
- Hyman, L.M. & Duranti, A., 1982. On the object relation in Bantu. In S. A. Thompson & P. Hopper, eds. *Studies in Transitivity*. New York: Academic Press, pp. 217–239.
- Irwin, P., 2012. *Unaccusativity at the interfaces*. Ph.D dissertation, New York University.
- Jackendoff, R., 1972. *Semantic interpretation in generative grammar*, Cambridge: MA: MIT Press.
- Jackendoff, R., 1990. *Semantic structures*, Cambridge: MA: MIT Press.
- Jackendoff, R., 1983. *Semantics and cognition*, Cambridge: MA: MIT Press.
- Johnson, K., 1991. Object positions. *Natural Language and Linguistic Theory*, 9, pp.577–636.
- Kagaya, R. & Olomi, R., 2009. *A Kiwoso vocabulary*, Tokyo: Research Institute for Languages and Culture of Asia and Africa (ILCAA), Tokyo University of Foreign Studies.
- Kallulli, D., 2007. Rethinking the Passive/Anticausative distinction. *Linguistic Inquiry*, 38(4),

pp.770–780.

- Kallulli, D., 2006. Unaccusatives with dative causers and experiencers: a unified account. In D. Hole, A. Meinunger, & W. Abraham, eds. *Dative and Other Cases*. Amsterdam: Benjamins, pp. 271–301.
- Katamba, F., 2003. Bantu nominal morphology. In D. Nurse & G. Philippson, eds. *The Bantu languages*. London: Routledge.
- Kearns, S., 2000. *Semantics*, Basingstoke: Macmillan.
- Kenny, A., 1963. *Action, emotion and will*, London: Routledge.
- Keyser, S.J. & Hale, K., 1993. On the argument structure and the lexical expression of syntactic relations. In *The view from building*. Cambridge: MIT Press, pp. 53–109.
- Khumalo, L., 2010. Passive, locative inversion in Ndebele and the unaccusative hypothesis. *South African Journal of African Languages*, 30(1), pp.22–34.
- Khumalo, L., 2009. The passive and stative constructions in Ndebele: A comparative analysis. *Nordic Journal of African Studies*, 18(2), pp.154–174.
- Kim, K., 2011. *External argument introducers*. Ph.D dissertation, University of Toronto.
- Kiss, K., 1998. Identificational focus versus information focus. *Language*, (74), pp.245–273.
- Kiss, T., Alexiadou, A. & Primux, B., 2015. Grammatical relations. In A. Alexiadou & T. Kiss, eds. *Syntax-theory analysis: an international handbook*. Munich: De Gruyter Mouton, pp. 218–245.
- Koontz-Garboden, A., 2009. Anticausativization. *Natural Language and Linguistic Theory*, 27, pp.77–138.
- Koontz-Garboden, A., 2007. *States, changes of state, and the Monotonicity Hypothesis*. Ph.D dissertation, Stanford University.
- Kratzer, A., 2005. Building resultatives. In C. Maienborn & A. Wollstein, eds. *Event arguments: Foundations and applications*. Tübingen: Niemeyer, pp. 177–212.
- Kratzer, A., 1996. Severing the external argument from its verb. In J. Rooryck & L. Zaring, eds. *Phrase structure and the lexicon*. Dordrecht: Kluwer Academic Publishers, pp. 109–137.
- Kratzer, A., 1994. *The event argument and the semantics of Voice*. M.A dissertation, University of Massachusetts at Amherst.
- Kula, N.C. & Marten, L., 2010. Argument structure and agency in Bemba passives. In K. Legere & C. Thornell, eds. *Bantu languages: Analysis, description and theory*. East African languages and dialects, 20. Rudiger Kopper, pp. 115–130.
- Labov, W., 1972. Some principles of linguistic methods. *Language in Society*, 1, pp.97–120.
- Lakoff, G., 1970. *Irregularity in syntax*, New York: NY: Holt, Rinehart and Winston.
- Lakoff, G., 1965. *On the nature of syntactic irregularity*. Ph.D dissertation, Indiana University.

- Lakoff, G., 1968. Some verbs of change and causation. In S. Kuno, ed. *Mathematical linguistics and automatic translation*. Cambridge: Harvard University Press, pp. 1–27.
- Lambrecht, K., 1994. *Information structure and sentence form: topic, focus, and the mental representation of discourse referents*, Cambridge: Cambridge University Press.
- Languages of Tanzania Project, 2009. *Atlasi ya lugha za Tanzania*, Dar es Salaam: Dar es Salaam University Press.
- Levin, B., 2000. Aspect, lexical semantic representation, and argument expression. In *Proceedings of the 26th Annual Meeting of the Berkeley Linguistics Society: General Session and Parasession on Aspect*. pp. 413–429.
- Levin, B., 1993. *English verb classes and alternation: A preliminary investigation*, Chicago: University of Chicago Press.
- Levin, B., 2009. Further exploration of the landscape of causation: comments on Alexiadou and Anagnostopoulou. In *Proceedings of the Workshop on Greek Syntax and Semantics, MIT Working Papers in Linguistics*. Cambridge: MIT Press, pp. 239–266.
- Levin, B. & Rappaport Hovav, M., 1994. A preliminary analysis of causative verbs. *Lingua*, 92, pp.35–77.
- Levin, B. & Rappaport Hovav, M., 2005. *Argument realization*, Cambridge: Cambridge University Press.
- Levin, B. & Rappaport Hovav, M., 1995. *Unaccusativity: At the syntax-lexical semantics interface*, Cambridge: MA: MIT Press.
- Levin, B. & Rappaport Hovav, M., 1991. Wiping the slate clean: a lexical semantic exploration. *Cognition*, 41, pp.123–151.
- Levinson, L., 2014. The ontology of roots and verbs. In A. Alexiadou, H. Borer, & F. Schäfer, eds. *The syntax of roots and roots of syntax*. Oxford: Oxford University Press, pp. 208–229.
- Lin, J., 2004. *Event structure and the encoding of arguments: The syntax of the Mandarin and English verb phrase*. Ph.D dissertation, Massachusetts Institute of Technology.
- Lohndal, T., 2014. *Phrase structure and argument structure: A case study of the syntax-semantics interface*, Oxford: Oxford University Press.
- Lothi, A., 2002. Verbal extensions in Bantu: The case of Swahili and Nyamwezi. *Africa and Asia*, 2, pp.4–26.
- Lusekelo, A., 2008. A descriptive account of the Bantu verbal extensions in Kinyakyusa. *Journal of Research in African Languages and Linguistics*, 8, pp.83–116.
- Lusekelo, A., 2012. *Inflectional and derivational morphology in optimality theory: Multiple object-nouns and co-occurrence of verbal extensions in Kinyakyusa*. PhD. dissertation, University of

Botswana.

- Machobane, M., 1995. The Sesotho locative constructions. *African Languages and Linguistics*, 16, pp.115–136.
- Maddieson, I., 2003. The sounds of Bantu languages. In D. Nurse & G. Philippson, eds. *The Bantu languages*. London: Routledge, pp. 15–41.
- Maho, J., 1999. *A comparative study of Bantu noun classes*, Gothenburg: Acta Universitatis Gothoburgensis.
- Maho, J., 2009. NUGL Online: The online version of the new update Guthrie list, a referential classification of the Bantu languages. Available at <go to glocalnet.net/mahopapers/nuglonline.pdf> [Retrieved on 26 April 2014].
- Mallya, A., 2011. *Locative expressions in Kiwoso*. M.A Dissertation, University of Dar es Salaam.
- Manninen, S. & Nelson, D., 2004. What is a passive? the case of Finnish. *Studia Linguistica*, 58(3), pp.212–251.
- Manzini, R., 1983. On control and control theory. *Linguistic Inquiry*, 14(3), pp.421–446.
- Marantz, A., 1997. No escape from syntax: Don't try morphological analysis in the privacy of your own lexicon. In A. Dimitriadis et al., eds. *Proceedings of the 21st Annual Penn Colloquium*. Philadelphia: PA: Penn Working Papers in Linguistics, pp. 201–225.
- Marantz, A., 1984. *On the nature of grammatical relations*, Cambridge: MA: MIT Press.
- Marelj, M., 2004. *Middles and argument structure across languages*. Utrecht Institute of linguistics OTS.
- Marten, L., 2006. Locative inversion in Otjiherero: more on morphosyntactic variation in Bantu. *ZAS Papers in Linguistics*, 43, pp.97–122.
- Martin, F. & Schäfer, F., 2014. Causation at the syntax-semantics interface. In B. Copley & F. Martin, eds. *Causation in grammatical structures*. Oxford: Oxford University Press, pp. 209–244.
- Matambirofa, F., 2003. *A lexical mapping theory account of the applicative and causative extensions in Shona*. Ph.D dissertation, University of Zimbabwe.
- Mathayo, K., 2013. *A grammatical sketch of Shimwela*, Dar es Salaam: Unpublished Grammar.
- Matsumoto, Y., 2000. Causative alternation in English and Japanese: a closer look. *English Linguistics*, 17, pp.160–192.
- McCawley, J., 1968. Lexical insertion in a transformational grammar without Deep structure. *CLS*, 4, pp.71–80.
- Mchombo, S., 1978. *A critical appraisal of the place of derivational morphology within transformational grammar, considered with primary reference to Chichewa and Swahili*. Ph.D dissertation, University of London.

- Mchombo, S., 1993. A formal analysis of the stative construction in Bantu. *African Languages and Linguistics*, 14, pp.5–28.
- Mchombo, S., 2007. Argument binding and morphology in Chichewa. In F. Hoyl et al., eds. *Morphosyntax of underrepresented languages*. Stanford: CA: CSLI Publications, pp. 203–221.
- Mchombo, S., 2004. *The syntax of Chichewa*, Cambridge: Cambridge University Press.
- Mckoon, G. & Macfarland, T., 2000. Externally and internally caused change-of-state-verbs. *Language*, 76, pp.833–858.
- Meinhof, C., 1899. *Grundriss einer lautlehre der Bantusprachen*, Leipzig: F.A Brockhaus.
- Meinhof, C., 1906. *Grundzuge einer vergleichenden grammatic der Bantu sprachen*, Berlin: Reimer.
- Merriam, S., 2002. *Qualitative research and case study applications in education*, San Francisco: Jossey-Bass Publishers.
- Mkude, D., 2005. *The passive construction in Swahili* Volume 4., Tokyo: Research Institute for Languages and Culture of Asia and Africa (ILCAA), Tokyo University of Foreign Studies.
- Mkude, D., 1995. *Towards a semantic typology of the Swahili language*, Tokyo: Institute for the study of languages and cultures of Asia and Africa (ILCAA).
- Moro, A., 1997. *The raising of predicates: predicative noun phrases and the theory of clause structure*, Cambridge: Cambridge University Press.
- Morrison, W., 1930. *A grammar of Baluba-Lulua language: as spoken in the Upper Kasai and Congo basin*, Luebo, Congo Belge: Leighton Wilson.
- Moshi, L., 1995. Locative in KiVunjo-Chaga. In A. Akinlabi, ed. *Theoretical approaches to African Linguistics*. Trenton: World Press, pp. 129–145.
- Moshi, L., 1998. Word order in multiple object constructions in KiVunjo-chaga. *Journal of African Languages and Linguistics*, 19, pp.137–152.
- Mushi, C., 2005. *Verbal derivational in Kikibosho*. M.A dissertation, University of Dar es Salaam.
- Neeleman, A. & Vermeulen, R., 2012. The syntactic expression of information structure. In A. Neeleman & R. Vermeulen, eds. *The syntax of topic, focus, and contrast*. Berlin: Walter de Gruyter, pp. 1–38.
- Ngonyani, D., 2003. *A grammar of Chingoni*, Munich: Lincom Europa.
- Nunan, D., 1992. *Research methods in language learning*, Cambridge: Cambridge University Press.
- Nurse, D., 1979. Description of sample Bantu languages of Tanzania. *African languages*, 5, pp.90–100.
- Nurse, D., 2008. *Tense and aspect in Bantu*, Oxford: Oxford University Press.
- Nyembezi, S., 1973. *Uhlelo IwesiZulu* 5th edit., Pietermaritzburg: Shuter and Shooter.
- Panagiotidis, P., 2015. *Categorial features: a generative theory of word class categories*, Cambridge:

Cambridge University Press.

- Parsons, T., 1990. *Events in the semantics of English*, Cambridge: MA: The MIT Press.
- Perlmutter, D.M., 1978. Impersonal passives and the unaccusative hypothesis. In *Proceedings of the Fourth Annual Meeting of the Berkeley Linguistics Society*. Berkeley: University of California, Berkeley, pp. 157–189.
- Perlmutter, D.M. & Postal, M., 1984. The I-Advancement exclusiveness Law. In D. Perlmutter & C. Rosen, eds. *Studies in Relational Grammar*. Chicago: University of Chicago Press, pp. 81–125.
- Perlmutter, D.M. & Postal, M., 1983. Toward a universal characterization of passivization. In D. M. Perlmutter, ed. *Studies in Relational Grammar*. Chicago: University of Chicago Press, pp. 3–29.
- Perlmutter, D.M. & Postal, P.M., 1977. Towards a universal characterization of passivization. In *Proceedings of the third annual meeting of the Berkeley Linguistics Society*. Berkeley: University of California, Berkeley, pp. 394–417.
- Perry, F., 2005. *Research in applied linguistics: becoming a discerning consumer*, Mahwah, N.J: Lawrence Erlbaum Associates.
- Pesetsky, D., 1995. *Zero syntax: Experiencer and cascades*, Cambridge: MA: MIT Press.
- Petzell, M., 2008. *The Kagulu language of Tanzania*, Koln: Rudiger Kopper Verlag.
- Pinker, S., 1989. *Learnability and cognition: The acquisition of argument structure*, Cambridge: MA: MIT Press.
- Piñón, C., 2001. Modelling the causative-inchoative alternation. *Linguistische Arbeitsberichte*, 76, pp.273–293.
- Polinsky, M., 1993. Subject inversion and intransitive subject incorporation. *Papers in ChicagoLinguistic Society*, 29, pp.343-361.
- Poulos, G. & Msimang, C., 1998. *A linguistic analysis of Zulu*, Pretoria: Via Afrika.
- Primus, B., 1999. *Cases and thematic roles: Ergative, accusative and active*, Niemeyer: Tübingen.
- Pustejovsky, J., 1995. *The generative lexicon*, Cambridge: MA: The MIT Press.
- Pustejovsky, J., 1991. The syntax of event structure. *Cognition*, 41(1-3), pp.47–81.
- Pylkkänen, L., 2002. *Introducing arguments*. Ph.D dissertation, Massachusetts Institute of Technology.
- Pylkkänen, L., 2008. *Introducing arguments*, Cambridge: MA: MIT Press.
- Radford, A., 2004. *English syntax*, Cambridge: Cambridge University Press.
- Radford, A., 1997. *Syntax: a minimalist introduction*, Cambridge: Cambridge University Press.
- Ramchand, G., 1997. *Aspect and predication: The semantics of argument structure*, Oxford: Clarendon Press.
- Ramchand, G., 2008. *Verb meaning and the lexicon*, Cambridge: Cambridge University Press.

- Rappaport Hovav, M., 2014. Lexical content and context: The causative alternation in English revisited. *Lingua*, 141, pp.8–29.
- Rappaport Hovav, M. & Levin, B., 1998. Building verb meanings. In M. Butt & W. Geuder, eds. *The projection of arguments: Lexical and compositional factors*. Stanford: CA: CSLI Publications, pp. 97–134.
- Reinhart, T., 2002. The Theta System – an overview. *Theoretical Linguistics*, 28(3), pp.229–290.
- Reinhart, T., 2000. The theta system: syntactic realization of verbal concepts, *OTS Working Papers in Linguistics*, 00.0/TL
- Rizzi, L., 2012. Delimitation effects and the cartography of the left periphery. In G. Grewendorf & T. E. Zimmermann, eds. *Discourse and grammar*. Berlin: De Gruyter Mouton, pp. 115–146.
- Rizzi, L., 1997. The fine structure of the left periphery. In *Elements of grammar: handbook of generative syntax*. Dordrecht: Kluwer Academic Publishers, pp. 281–337.
- Rizzi, L., 2013. The functional structure of the sentence and the cartography. In M. Dikken den, ed. *The Cambridge Handbook of Generative Syntax*. Cambridge: Cambridge University Press, pp. 352–425.
- Rochemont, M., 2013. Discourse new, F-marking, and normal stress. *Lingua*, (136), pp.38–62.
- Rooth, M., 1992. A theory of focus interpretation. *Natural Language Semantics*, (1), pp.75–116.
- Rugemalira, J., 2005. *A grammar of Runyambo*, Dar es Salaam: LOT Publications: Grammar Series No1.
- Rugemalira, J. et al., 2012. *Harmonization of the orthography of the Bantu languages of Tanzania* Cape town: The Centre for Advanced Studies of African Society (CASAS).
- Rugemalira, J., 2004. Locative argument in Bantu. In A. Akinlabi & O. Adesola, eds. *Proceedings of the 4th World Congress of African Linguistics*. Germany: Rudiger Kopper Verlag Koln, pp. 285–295.
- Rugemalira, J., 1993. *Runyambo verbal extensions and constraints on predicate structure*. Ph.D. dissertation, University of California, Berkeley.
- Rugemalira, J., 2014. *Sarufi ya Kigogo*, Dar es Salaam: Unpublished Grammar.
- Rugemalira, J., 1995. Verb extensions in Runyambo. *Afrikanistische Arbeitspapiere (AAP)*, 41, pp.51–87.
- Ryle, G., 1947. *The concept of mind*, London: Barnes & Noble.
- Salzmann, M., 2004. *Theoretical approaches to locative inversion*. M.A dissertation, University of Zurich.
- Sanderson, M., 1922. *A Yao grammar*, London, New York: Society for promoting christian knowledge, Macmillan Co.

- Schadeberg, T., 2003. Derivation. In D. Nurse & G. Phillipson, eds. *The Bantu languages*. New York: Routledge, pp. 71–89.
- Schäfer, F., 2007. External Argument “Reduction” within a Configurational Theta Theory. *GLOW XXX*, University of Tromsø.
- Schäfer, F., 2009. The causative alternation. *Language and Linguistics Compass*, 3(2), pp.641–681.
- Schäfer, F., 2008. *The syntax of (anti-)causatives. External arguments in change-of-state contexts*, Amsterdam: John Benjamins.
- Schäfer, F., 2012. Two types of external argument licensing- the case of causers. *Studia Linguistica*, 66(2), pp.128–180.
- Seidl, A. & Dimitriadis, A., 2003. Statives and reciprocal morphology in Swahili. *Typologie des langues d’Afrique and universaux de la grammaire*, 1, pp.239–284.
- Shibatani, M., 1985. Passives and related constructions: a prototype analysis. *Language*, 61, pp.821–848.
- Shibatani, M., 1976. *The grammar of causative constructions*, New York: Academic Press.
- Shlonsky, U., 2010a. The Cartographic Enterprise in Syntax. *Language and Linguistics Compass*, 4(6), pp.417–429.
- Shlonsky, U., 2010b. The cartographic enterprise in syntax. *Language and Linguistics Compass*, 4(6), pp.417–429.
- Siddiqi, D., 2009. *Syntax within the word: Economy, allomorphy, and argument selection in Distributed Morphology*, Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Siloni, T., 2003. Active lexicon. *Theoretical linguistics*, 28, pp.383–400.
- Slobin, D., 2004. The many way to search for a frog: linguistic typology and the expression of motion events. In S. Stromqvist & L. Verhoeven, eds. *Relating events in narrative: typological and contextual perspectives*. Mahwah, NJ: Lawrence Erlbaum Associates, pp. 219–257.
- Slobin, D. & Hoiting, N., 1994. Reference to movement in spoken and signed languages: typological considerations. In *Proceedings of BLS 20*. pp. 487–505.
- Smith, C.S., 1997. *The parameter of aspect* 2nd edit., Dordrecht: Kluwer Academic Publishers.
- Smith, C.S., 1991. *The parameter of Aspect* 1st edit., Dordrecht: Kluwer Academic Publishers.
- Solstad, T., 2009. On the implicitness of arguments in event passives. In A. Schardl, M. Walkow, & M. Abdurrahman, eds. *Proceedings of NELS 38*. Amherst: GLSA, pp. 265–374.
- Stowell, T., 1981. *Origins of phrase structures*. Ph.D dissertation, Massachusetts Institute of Technology.
- Stroik, T., 1992. Middles and movement. *Linguistic Inquiry*, 23, pp.127–137.
- Taljaard, P. & Bosch, S., 1993. *Handbook of isiZulu*, Pretoria: J.L. van Schaik.

- Tallerman, M., 2015. *Understanding syntax* 4th edit., New York: Routledge.
- Tallerman, M., 2005. *Understanding syntax* 2nd edit., London: Hodder Arnold.
- Talmy, L., 1985. Lexicalization patterns: semantic structure in lexical forms. In T. Shopen, ed. *Grammatical categories and the lexicon*. Chicago: University of Chicago Press, pp. 57–149.
- Talmy, L., 2000. *Toward a cognitive semantics: typology and process in concept structuring*, Cambridge: MA: MIT Press.
- Tenny, C. & Pustejovsky, J., 2000. *Events as grammatical objects: the converging perspectives of lexical semantics and syntax*, Stanford: CA: CSLI Publications.
- Van Valin, R., 1993. A synopsis of Role and Reference Grammar. In R. Van Valin, ed. *Advances in Role and Reference Grammar*. Amsterdam/Philadelphia: John Benjamins, pp. 1–164.
- Van Valin, R. & LaPolla, R.J., 1997. *Syntax: form, meaning, and function*, Cambridge: Cambridge University Press.
- Vallduví, E., 1990. *The information component*. Ph.D dissertation, University of Pennsylvania.
- Vendler, Z., 1967. *Linguistics in Philosophy*, Ithaca, NY: Cornell University Press.
- Vendler, Z., 1957. Verbs and Times. *Philosophical Review*, 56, pp.143–160.
- Verkuyl, H.J., 1993. *The theory of aspectuality*, Cambridge: Cambridge University Press.
- Verkuyl, H.J., 1989. Aspectual classes and aspectual composition. *Linguistics and Philosophy*, 12, pp.39–94.
- Verkuyl, H.J., 1972. *On the compositional nature of the aspects*, Reidel: Dordrecht.
- Wechsler, S., 2015. *Word meaning and syntax*, Oxford: Oxford University Press.
- Williams, A., 2015. *Arguments in syntax and semantics*, Cambridge: Cambridge University Press.
- Williams, E., 1981. Argument structure and morphology. *The Linguistic Review*, 1(1), pp.81–114.
- Wright, S., 2001. *Internally and externally caused change-of-state verbs*. Ph.D dissertation, Northwestern University (Evanston, IL).
- Wright, S., 2002. Transitivity and change of state verbs. In J. Larsen & M. Paster, eds. *Proceedings of the 28th Annual Meeting of the Berkeley Linguistics Society*. Berkeley: CA: Berkeley Linguistics Society, pp. 339–350.
- Zaenen, A. & Engdahl, E., 1994. Descriptive and theoretical syntax in the lexicon. In B. T. . Atkins & A. Zampolli, eds. *Computational approaches to the lexicon*. Oxford, New York: Oxford University Press, pp. 181–212.
- Zeller, J., 2013. Locative inversion in Bantu and predication. *Linguistics*, 51(6), pp.1107–1146.
- Ziervogel, D. & Litt, M., 1952. *A grammar of Swati (siSwati)*, Johannesburg: Witwatersrand University Press.
- Zlatev, J. & Peerapat, Y., 2004. A third way to travel: the place of Thai in motion-event typology. In

S. Stromqvist & L. Verhoeven, eds. *Relating events in narrative: typological and contextual perspectives*. Mahwah, NJ: Lawrence Erlbaum Associates, pp. 219–257.

Zombolou, K., 2004. *Verbal alternations in Greek: a semantic approach*. Ph.D dissertation, University of Reading.

APPENDIXES

APPENDIX A: CONSTRUCTIONS INVOLVING CHANGE OF STATE VERBS

1. Externally caused change of state verbs

1.1 *Baara* 'break' verbs

1.1.1 Causative variant

1.1.1.1 Agent as an external argument

- (1) a. *wa-ka wa- le- baar-a nungu*
 2-woman 2AGRs-PST- break-FV 9pot
 'The women broke the pot'
- b. *waka wa- le- sak- a umbi*
 2-woman 2AGRs-PST- grind- FV 9millet
 'Women ground the millet'
- c. *wa-na wa- le- asuo nungu*
 2-child 2AGRs-PST- crack 9pot
 'Children cracked the pot'
- d. *wa-ka wa- le- ratwo kitambaa*
 2-woman 2AGRs-PST- tear 7cloth
 'Women teared the cloth'

1.1.1.2 Instrument as an external argument

- (2) a. *iwee lyi- le- baar- a nungu*
 5stone 5AGRs-PST- break- FV 9pot
 'The stone broke the pot'
- b. *isebhe lyi- le- sak- a umbi*
 5grind stone 5AGRs-PST- grind- FV 9millet
 'The grinding stone ground the millet'
- c. *iwee lyi- le- asuo nungu*
 5stone 5AGRs-PST- crack 9pot
 'A stone cracked the pot'

- d. *nsumari u- le- ratwo kitambaa*
 3nail 3AGRs-PST- tear 7cloth
 ‘The nail teared the cloth’

1.1.1.3 Natural force as an external causer

- (3) a. *upepo lu- le- baar- a nungu*
 11wind 11AGRs-PST- break- FV 9pot
 ‘The wind broke the pot’
- b. *??upepo lu- le- sak- a umbi*
 11wind 11AGRs-PST- grind- FV 9millet
 ‘The wind ground the millet’
- c. *mmbari u- le- asuo nungu*
 9sunlight 9AGRs-PST- crack 9pot
 ‘The sunlight cracked the pot’
- d. *upepo lu- le- ratwo kitambaa*
 11wind 11AGRs-PST- tear 7cloth
 ‘The wind ripped the cloth’

1.1.1.4 Agent-oriented phrase modification

- (4) a. *wa-ka wa- le- baar- a nungu (ko ngufu)*
 2-woman 2AGRs-PST- break- FV 9pot (with force)
 ‘Women broke the pot (forcefully)’
- b. *wa-ka wa- le- sak- a umbi (kitondo)*
 2-woman 2AGRs-PST- grind- FV 9millet (with foolish)
 ‘Women ground the millet (foolishly)’
- c. *wa-na wa- le- asuo nungu (kitondo)*
 2-child 2AGRs-PST- crack 9pot (with foolish)
 ‘Children cracked the pot foolishly’
- d. *wa-ka wa- le- ratwo kitambaa (ko nashi)*
 2-woman 2AGRs-PST- tear 7cloth (with anger)
 ‘Women teared the cloth (angrily)’

1.1.1.5 Purpose clause modification

- (5) a. *wa-ka wa- le- baar- a nungu (kusudi waure ingi)*
 2-woman 2AGRs-PST- break- FV 9pot (so that they buy other)
 ‘Women broke the pot (so that they buy another one)’
- b. *wa-ka wa- le- sak- a (umbi kusudi waone unga)*
 2-woman 2AGRs-PST- grind- FV millet (so that they get flour)
 ‘Women ground the millet (so that they get the flour)’
- c. *wa-na wa- le- asuo nungu (kusudi iire)*
 2-child 2AGRs-PST- crack 9pot (so that it leaks)
 ‘Children cracked the pot (so that it leaks)’
- d. *wa-ka wa- le- ratwo kitambaa (kusudi walasambye)*
 2-woman 2AGRs-PST- tear 7cloth (so that they do not wash)
 ‘Women teared the cloth (so that they do not wash (it))’

1.1.1.6 Temporal phrase modification

- (6) a. *wa-ka wa- le- baar- a nungu (??ko sekunde)/(sekunde)*
 2-woman 2AGRs-PST- break- FV 9pot (??for second)/(second)
 ‘The women broke the pot (??for a second)/ (in a second)’
- b. *wa-ka wa- le- sak- a umbi (ko masaa)/masaa)*
 2-woman 2AGRs-PST- grind- FV 9millet (for hours)/ (hours)
 ‘Women ground the millet (for hours)/ (in hours)’
- c. *wa-na wa- le- asuo nungu (ko dakika)/(dakika)*
 2-child 2AGRs-PST- crack 9pot (for minute)/ (minute)
 ‘Children cracked the pot (for a minute)/ (in a minute)’
- d. *wa-ka wa- le- ratwo kitambaa (ko dakika)/(dakika)*
 2-woman 2AGRs-PST- tear 7cloth (for minute)/ (minute)
 ‘Women ripped the cloth (for a minute)/ (in a minute)’

1.1.1.7 Manner/Instrument adjuncts

- (7) a. *wa-ka wa- le- baar- a nungu (bhicho)/(na iwee)*
 2-woman 2AGRs-PST- break- FV 9pot (bad)/ (by stone)
 ‘Women broke the pot badly/with a (stone)/ (by means of a stone)’

- b. *wa-ka wa- le- sak- a umbi (nicha)/(na isebhe)*
 2-woman 2AGRs-PST- grind- FV 9millet (well)/ (by stone)
 ‘Women ground the millet (well)/ (by means of a grinding stone)’
- c. *wa-na wa- le- asuo nungu(bhicho)/(na iwee)*
 2-child 2AGRs-PST- crack 9pot (bad)/ (by stone)
 ‘Children cracked the pot(badly)/ (by means of a stone)’
- d. *wa-ka wa- le- ratwo kitambaa(bhicho)/(na nsumari)*
 2-woman 2AGRs-PST- tear 7cloth (bad)/ (by 3nail)
 ‘Women tore the cloth (badly)/ (through the nail)’

1.1.2 The anticausative variants

- (8) a. *nungu i- le- bar- ik- a*
 9pot 9AGRs- PST- break- STAT-FV
 ‘The pot became/got broken’
- b. *umbi u- le- sak- ik- a*
 9millet 9AGRs-PST- grind- STAT- FV
 ‘The millet become/got ground’
- c. *nungu i- le asu k a*
 9pot 9AGRs- PST- crack- STAT-FV
 ‘The pot got/became cracked’
- d. *kitambaa ki- le- ratu- k- a*
 7cloth 7AGRs-PST- tear- STAT-FV
 ‘The cloth got/became tore’

1.1.2.1 Prepositional phrase modification

- (9) a. *nungu i- le- bar- ik- a (ko wa-ka)/(ko i-wee)/(ko upepo)*
 9pot 9AGRs-PST- break-STAT- FV (to 2-woman)/(by 5stone)/(from
 11wind)
 The pot became/got broken (to the potentiality of women)/ (by means of a stone)/
 (from wind)

- b. *umbi u- le- sak- ik- a (ko wa-ka)/(ko isebhe)/(*ko upepo)*
 9millet 9AGRS-PST- grind- STAT-FV to 2-woman/(by 5stone)/ (*by 11wind)
 ‘Millet became/got ground (to the ability of the women)/ (by means of a grinding stone)/ (*from wind)’
- c. *nungu i- le asu k a (ko waka)/(ko iwee)/(ko mmbari)*
 9pot 9AGRS-PST- crack- STAT-FV (to women)/(with stone)/(with 9sunlight)
 ‘The pot got/became cracked (to the ability/potentiality of women)/ (by means of a stone)/ (through sunlight)’
- d. *kitambaa ki- le- ratu- k-a (ko waka)/ (ko nsumari)/(koopepo)*
 7cloth 7AGRS-PST- tear- STAT-FV (to women)/ (with 3nail)/ (with 11wind)
 ‘The cloth got/became tore (to the ability/potentiality of women)/ (by means of a nail)/ (through/from wind)’

1.1.2.2 Agent-oriented adverbial modification

- (10) a. *nungu i- le- bar- ik- a (*ko makusudi)*
 9pot 9AGRS-PST- break- STAT-FV (with purpose)
 ‘The pot became broken (*intentionally)’
- b. *umbi u- le- sak- ik- a (kirango)*
 9millet 9AGRS-PST- grind- STAT-FV (with clever)
 ‘The millet got/became ground (cleverly)’
- c. *nungu i- le asu k a (ko sifa)*
 9pot 9AGRS- PST- crack- STAT-FV (with pride)
 ‘The pot got/became cracked (proudly)’
- d. *kitambaa ki- le- ratu- k- a (ko nashi)*
 7cloth 7AGRS-PST- tear- STAT-FV (with anger)
 ‘The cloth got/became tore (angrily)’

1.1.2.3 Purpose clause modification

- (11) a. *nungu i- le- bar- ik- a (*kusudi ilatumike)*
 9pot 9AGRS-PST break- STAT-FV (*so that it is not used)
 ‘The pot became/got broken) (*so that it is not used)’

- b. *umbi o- sak- ik- a (kusudi wa-na wa-ne uji)*
 9millet 9AGRs-grind- STAT-FV (so that 2-child 2-take porridge)
 ‘The millet became ground (*so that children take porridge)’
- c. *nungu i- le asu k a (*kusudi ilakore)*
 9pot 9AGRs- PST- crack- STAT-FV (so that it does not cook)
 ‘The pot got/became cracked (*so that it is not used for cooking)’
- d. *kitambaa ki- le- ratu- k- a (*kusudi kilarao)*
 7cloth 7AGRs-PST- tear- STAT-FV (so that it is not wore)
 ‘The cloth got/became tore (*so that it is not wore)’

1.1.2.4 Temporal adjuncts modification

- (12) a. *nungu i- le- bar- ik- a (??ko sekunde)/(sekunde)*
 9pot 9AGRs-PST- break- STAT-FV (??for second)/(second)
 ‘The pot got/became broken (??for a second)/ (in a second)’
- b. *umbi o- sak- ik- a (ko masaa abhi)/(masaa abhi)*
 9millet 9AGRs-grind- STAT-FV (for hours two)/ (hours two)
 ‘The millet became ground (for two hours)/ (in two hours)’
- c. *nungu i- le asu k a (ko dakika)/(dakika)*
 9pot 9AGRs- PST- crack- STAT-FV (for minute)/ (minute)
 ‘The pot got/became cracked (for a minute)/ (in a minute)’
- d. *kitambaa ki- le- ratu- k- a (ko dakika)/ (dakika)*
 7cloth 7AGRs-PST- tear- STAT-FV (for minute)/ (minute)
 ‘The cloth got/became tore (for a minute)/ (in a minute)’

1.1.2.5 Causing event modification

- (13) a. *nungu i- le- bar- ik- a (kweekorya(ho) kila siku)*
 9pot 9AGRs-PST- break- STAT-FV (by cooking everyday)
 ‘The pot became/got broken (by cooking (in it) every day)’
- b. *umbi o- sak- ik- a (ko ianika)*
 9millet 9AGRs-grind- STAT-FV (by putting in sun)
 ‘The millet became ground (by keeping in the sunlight)’
- c. *nungu i- le asu k a (ko ibhiko muda uushaa)*

9pot 9AGRs- PST- crack- STAT-FV (by been kept hot water)
 ‘The pot got/became cracked (by been kept hot water)’

- d. *kitambaa ki- le- ratu- k- a (ko imaso nche)*
 7cloth 7AGRs-PST- tear- STAT-FV (by been hung outside)
 ‘The cloth got/became tore (by been hung outside)’

1.1.2.6 Reason clause modification

- (14) a. *nungu i- le- bar- ik- a (ko sababu ya uku)*
 9pot 9AGRs-PST- break- STAT-FV (because of wearing out)
 ‘The pot became/got broken (because of wearing out)’
- b. *umbi o- sak- ik- a (ko sababu ya mmbari)*
 9millet 9AGRs-grind- STAT-FV (because of 9sunlight)
 ‘The millet became ground (because of the sunlight)’
- c. *nungu i- le asu k a (ko sababu ya muda uushaa)*
 9pot 9AGRs- PST- crack- STAT-FV (because of hot water)
 ‘The pot got/became cracked (because of hot water)’
- d. *kitambaa ki- le- ratu- k- a (kosababu ya upepo)*
 7cloth 7AGRs-PST- tear- STAT-FV (because of 11wind)
 ‘The cloth got/became tore (because of the wind)’

1.1.2.7 Manner/Instrument adjunct modifications

- (15) a. *nungu i- le- bar- ik- a (bhicho)/(ko iwee lyi-ngane)*
 9pot 9AGRs-PST- break-STAT- FV (bad)/ (by 9stone 9big)
 ‘The pot became broken (badly)/ (by means of a big stone)’
- b. *umbi o- sak- ik- a (nicha)/(ko iwee)*
 9millet 9AGRs-grind- STAT-FV (well)/(with 5stone)
 ‘The millet became ground (well)/ (by the use of the stone)’
- c. *nungu i- le asu k a (bhicho)/(ko iwee)*
 9pot 9AGRs- PST- crack- STAT-FV (bad)/ (with 5stone)
 ‘The pot got/became cracked (bad)/ (with stone)’
- d. *kitambaa ki- le- ratu- k- a (bhicho)/(ko nsumari)*
 7cloth 7AGRs-PST- tear- STAT-FV (bad)/ (with 3nail)

‘The cloth got/became tore (badly)/ (through/from a nail)’

1.1.3 Passives with PP modification

- (16) a. *nungu i- le- baar- o (na wa-na)/(na iwee)/(na upepo)*
 9pot 9AGRs-PST- break- PASS (by 2-child)/ (by 5stone)/ (by wind)
 ‘The pot was broken (by the children)/ (by the stone)/ (by the wind)’
- b. *umbi u- le- sak- o (na wa-ka)/(na iwee)/(*na upepo)*
 9millet 9AGRs-PST- grind- PASS (by 2-woman)/(by stone)/(by 11wind)
 ‘The millet was ground (by women)/(by a grinding stone)/(*by wind)’
- c. *nungu i- le asu- o (na wa-na)/(na iwee)/(na upepo)*
 9pot 9AGRs-PST- crack- PASS (by 2-child)/ (by 5stone)/ (by 11wind)
 ‘The pot was cracked (by the children)/ (by the stone)/ (by the wind)’
- d. *kitambaa ki- le- ratu- o(na wa-na)/(na nsumari)/(na upepo)*
 7cloth 7AGRs-PST- tear- PASS (by 2-child)/ (by 3nail)/ (by wind)
 ‘The cloth got/became tore (by the children)/ (by the nail)/ (by the wind)’

1.1.3.1 Agent-oriented adverbial modification

- (17) a. *nungu i- le- baar- o (ki-tondo)*
 9pot 9AGRs-PST- break- PASS (with foolish)
 ‘The pot was broken (foolishly)’
- b. *umbi u- le- sak- o ki-rango*
 millet AGRs- PST- grind- PASS with clever
 ‘The millet was ground cleverly’
- c. *nungu i- le asu- o (ko nashi)*
 9pot 9AGRs- PST- crack- PASS (with anger)
 ‘The was cracked angrily)’
- d. *kitambaa ki- le- ratu- o (ko makusudi)*
 7cloth 7AGRs-PST- tear- PASS (with purpose)
 ‘The cloth got/became tore (purposely)’

1.1.3.2 The purpose clause modification

- (18) a. *nungu i- le- baar- o (kusudi iurwe ingi)*
 9pot 9AGRs-PST- break- PASS (so that bought another)
 ‘The pot was broken (so that it is bought another one)’
- b. *umbi u- le- sak- o (kusudi wa-na wa-one unga)*
 9millet 9AGRs-PST- grind- PASS (so that 2-child get flour)
 ‘The millet was ground (so that children got flour)’
- c. *nungu i- le asu- o (kusudi iire)*
 9pot 9AGRs- PST- crack- PASS (so that it leaks)
 ‘The pot was cracked (so that it leaks)’
- d. *kitambaa ki- le- ratu- o (kusudi kilarao)*
 7cloth 7AGRs-PST- tear- PASS (so that it is not wore)
 ‘The cloth was tore (so that it is not wore)’

1.1.3.3 Temporal adjuncts modification

- (19) a. *nungu i- le- baar- o (??ko dakika)/(dakika)*
 9pot 9AGRs-PST- break- PASS (??for second)/(in second)
 ‘The pot was broken (for a second)/ (in a second)’
- b. *umbi u- le- sak- o (ko dakika tanu)/(dakika tanu)*
 millet AGRs- PST- grind- PASS (for minute five)/ (minute five)
 ‘Millet was ground (for five minutes)/ (in five minutes)’
- c. *nungu i- le asu- o (ko dakika)/(dakika)*
 9pot 9AGRs- PST- crack- PASS (for minute)/ (minute)
 ‘The pot was cracked (?for a minute)/ (in a minute)’
- d. *kitambaa ki- le- ratu- o (ko dakika)/(dakika)*
 7cloth 7AGRs-PST- tear- PASS (for minute)/ (minute)
 ‘The cloth got/became tore (for a minute)/ (in a minute)’

1.1.3.4 Manner/Instrument adjuncts modification

- (20) a. *nungu i- le- baar- o (bhicho)/(na iwee)*
 9pot 9AGRs- PST- break- PASS (bad)/ (by stone)
 ‘The pot was broken (badly)/ (by (the use of) a stone)’

- b. *umbi u- le- sak- o (uwin)/(na mashiina)*
 9millet 9AGRs-PST- grind- PASS (fast)/(by machine)
 ‘The millet was ground (fast)/ (by (the use of) machine)’
- c. *nungu i- le asu- o (bhicho)/(na iwee)*
 9pot 9AGRs-PST- crack- PASS (bad)/ (stone)
 ‘The pot was cracked (badly)/ (by a stone)’
- d. *kitambaa ki- le- ratu- o (bhicho)/(na nsumari)*
 7cloth 7AGRs-PST- tear- PASS (bad)/ (by 3nail)
 ‘The cloth got/became tore (badly)/ (by a nail)’

1.1.4 Middle constructions

- (21) a. *nungu (i) i- bar- ik- a- a*
 9pot (this) 9AGRs-break- STAT-FV- HAB
 ‘This pot breaks (easily)’
- b. *umbi (muumu) u- sak- ik- a- a*
 9millet (dry) 9AGRs-grind- STAT- FV- HAB
 ‘Dry millet grinds (easily)’
- c. *shilasi (sha china) shi- asu- k a a*
 8glasses (of china) 8AGRs-crack-STAT- FV- HAB
 ‘Chinese glasses cracks/breaks (easily)’
- d. *kitambaa(kya china) ki- ratu- k a a*
 7cloth (of china) 7AGRs-tear-STAT- FV- HAB
 ‘Chinese cloth tears (easily)’

1.2 *many* ‘cut’ verbs

1.2.1 Causative variants

1.2.1.1 Agent/instrument as external arguments

- (22) a. *Leka ni- (a)/-(ki) le- many- a n’ji*
 Leka INIT- 1/7AGRs- PST- cut- FV 3tree
 ‘(Leka)/(the axe) cut the tree’
- b. *wa-ka/nndo (wa)/(u)- le- rach- a mbyee*
 2-woman/9knife 2/9AGRs- PST- slash- FV 9banana

‘Women/the knife slashed the banana’

- c. *womi/nsumenu* (wa)/(u)- *le-* *rand-* *a* *mbao*
 2-man/3saw 2/3AGRs- PST- saw- FV 10wood

‘Men/the saw cut the woods’

- d. *wa-na/kyaandu* (wa)/(ki)- *le-* *dummb-o* *mauwo*
 2child/7knife 2/7AGRs- PST- cut- FV 6flowers

‘Children/knife cut the flowers’

1.2.1.2 Natural force as external causer

- (23) a. *??upepo* *lu-* *le-* *many-* *a* *n’ji*
 11wind 9AGRs-PST- cut- FV 3tree

‘The wind cut the tree’

- b. *??upepo* *lu* *le-* *rach-* *a* *mbyee*
 11wind 9AGRs-PST- slash- FV 9banana

‘The wind slashed the banana’

- c. *#upepo* *lu-* *le-* *rand-* *a* *mbao*
 11wind 9AGRs-PST- saw- FV 10wood

‘The wind cut the woods’

- d. *??upepo* *lu-* *le-* *dummb-o* *mauwo*
 11wind 9AGRs-PST- cut- FV 6flowers

‘The wind cut the flowers’

1.2.1.3 Agent-oriented phrase modification

- (24) a. *Leka ni-* *a-* *le-* *many-* *a* *n’ji* (*kirango*)
 Leka INIT- AGRs-PST- cut- FV 3tree (with skill)

‘Leka cut the tree skillfully’

- b. *wa-ka* *wa-* *le-* *rach-* *a* *mbyee* (*kirango*)
 2-woman 2AGRs-PST- slash- FV 9banana (with skill)

‘Women slashed the banana (skillfully)’

- c. *womi wa-* *le-* *rand-* *a* *mbao* (*kirango*)
 2-man 2AGRs-PST- saw- FV 10wood (with skill)

‘Men cut the woods (skillfully)’

- d. *wa-na wa- le- dummb-o mauwo (kirango)*
 2child 2AGRs-PST- cut- FV 6flowers (with skill)
 ‘Children cut the flowers (skillfully)’

1.2.1.4 Purpose clause modification

- (25) a. *Leka ni- a- le- many- a n’ji (kusudi nakumbe)*
 Leka INIT- AGRs-PST- cut- FV 3tree (so that he sells)
 ‘Leka cut the tree (so that he sells)’
- b. *wa-ka wa- le- rach- a mbyee (kusudi wakore)*
 2-woman 2AGRs-PST- slash- FV 9banana (so that they cook)
 ‘Women slashed the banana (so that the cook)’
- c. *womi wa- le- rand- a mbao (kusudi wakumbe)*
 2-man 2AGRs-PST- saw- FV 10wood (so that they sell)
 ‘Men cut the woods (so that they sell)’
- d. *wa-na wa- le- dummb-o mauwo (kusudi wapambe)*
 2child 2AGRs-PST- cut- FV 6flowers (so that they decorate)
 ‘Children cut the flowers (so that they decorate)’

1.2.1.5 Temporal phrase modification

- (26) a. *Leka ni- a- le- many- a n’ji (ko masaa abhi)/(masaa abhi)*
 Leka INIT- AGRs-PST- cut- FV 3tree (for hours two)/(hours two)
 Leka cut the tree (for two hours)/ (in two hours)
- b. *wa-ka wa- le- rach- a mbyee (ko dakika)/(dakika)*
 2-woman 2AGRs-PST- slash- FV 9banana (for minute)/ (minute)
 ‘Women slashed the banana (for a minute)/ (in a minute)’
- c. *womi wa- le- rand- a mbao (ko siku)/(siku)*
 2-man 2AGRs-PST- saw- FV 10wood (for day)/ (day)
 ‘Men cut the woods (for a day)/ (in a day)’
- d. *wa-na wa- le- dummb-o mauwo (ko masaa adadu)/(masaa adadu)*
 2child 2AGRs-PST- cut- FV 6flowers (for hours three)/ (hours three)
 ‘Children cut the flowers (for three hours)/ (in three hours)’

1.2.1.6 Manner/Instrument adjuncts

- (27) a. *Leka ni- a- le- many- a n'ji (ferefere)/(na kyaara)*
 Leka INIT- AGRs-PST- cut- FV 3tree (quickly)/ (by axe)
 'Leka cut the tree (quickly)/ (by means of an axe)'
- b. *wa-ka wa- le- rach- a mbyee (nicha)/(na nndo)*
 2-woman 2AGRs-PST- slash- FV 9banana (nice)/(with knife)
 'Women slashed the banana (nicely)/ (with knife)'
- c. *womi wa- le- rand- a mbao (ferefere)/(na nsumenu)*
 2-man 2AGRs-PST- saw- FV 10wood (quickly)/ (with 3saw)
 'Men cut the woods (quickly)/ (by means of a saw)'
- d. *wa-na wa- le- dummb-o mauwo(nicha)/(na kyaandu)*
 2child 2AGRs-PST- cut- FV 6flowers (nice)/(with knife)
 'Children cut the flowers (nicely/by means of a knife)'

1.2.2 The anticausative variants

- (28) a. *n'ji u- le- many- ik- a*
 3tree 3AGRs-PST- cut- STAT-FV
 'The tree got/became cut'
- b. *manduu wa- le- rach-ik-a*
 6leaves 6AGRs-PST- slash-STAT-FV
 'Banana leaves (were slashable)/ (became slashed)'
- c. *mbao ti- le- rand- ik- a*
 10wood 10AGRs-PST- saw- STAT-FV
 'Woods became/got sawn'
- d. *mauwo wa- le- dumbu-k- a*
 6flowers 6AGRs-PST- cut- STAT-FV
 'The flowers (were cuttable)/ (became cut)'

1.2.2.1 Prepositional phrase modification

- (29) a. *n'ji u- le- many- ik- a (*na Leka)/(ko leka)*
 3tree 3AGRs-PST- cut- STAT-FV (*by Leka)/ (to Leka)
 'The tree became cut/was cuttable) (*by Leka) (to the ability of Leka)'

- b. *mmbyee ti- le- rach- ik- a (*na waka)/(ko waka)*
 9banana 9AGRs-PST- slash- STAT- FV (by 2-woman)/ (to 2-woman)
 ‘Bananas were slashable (*by women)/ (to the ability/potentiality of women)’
- c. *mbao ti- le- rand- ik- a (*na wo-mi)/(ko wo-mi)*
 10wood 10AGRs-PST- saw- STAT- FV (by 2-man)/(to 2-man)
 ‘Woods became sawed (*by men) /(to the ability/potentiality of men)’
- d. *mauwo a- le- dumbu-k-a (*na wa-na)/(ko wa-na)*
 6flowers 6AGRs-PST- cut- STAT- FV (by 2-child)/(to 2-child)
 ‘Flowers were cutabe (by children)/(to the ability/potentiality of children)’

1.2.2.2 Agent-oriented adverbial modification

- (30) a. *n’ji u- le- many- ik- a (*kirango)*
 3tree 3AGRs-PST- cut- STAT- FV (*with skill)
 The tree became cut/was capable of being cut (*skillfully)
- b. *mmbyee ti- le- rach- ik- a (*kirango)*
 9banana 9AGRs-PST- slash- STAT- FV (with clever)
 ‘Bananas became slashed/ (*cleverly)’
- c. *mbao ti- le- rand-ik- a (*kirango)*
 10wood 10AGRs-PST- saw-STAT- FV (with clever)
 ‘Woods got sawed (*cleverly)’
- d. *mauwo wa- le- dumb-uk- a (*kirango)*
 6flowers 6AGRs-PST- slash- STAT- FV (with clever)
 ‘Flowers became cut (*cleverly)’

1.2.2.3 Purpose clause modification

- (31) a. *n’ji u- le- many- ik- a (*kusudi ukumbwe)*
 3tree 3AGRs-PST- cut- STAT- FV (*so that it is sold)
 ‘The tree became cut so that it is sold’
- b. *mmbyee ti- le- rach- ik- a (*kusudi tikorwe)*
 9banana 9AGRs-PST- slash- STAT- FV (so that they are cooked)
 ‘Bananas became slashed/ (*so that they are cooked)’

- c. *mbao ti- le- rand-ik- a (*kusudi tikumbwe)*
 10wood 10AGRs-PST-saw-STAT- FV (so that they are sold)
 ‘Woods got sawed (*so that they are sold)’
- d. *mauwo wa- le- dumb-uk- a (*kusudi wapambe)*
 6flowers 6AGRs-PST- slash- STAT- FV (so that they decorate)
 ‘Flowers became cut (*so that they decorate)’

1.2.2.4 Temporal adjuncts modification

- (32) a. *n’ji u- le- many- ik- a (ko masaa abhi)/(masaa abhi)*
 3tree 3AGRs-PST-cut- STAT- FV (for hours two)/(hours two)
 ‘The tree became cut/was capable of being cut (for two hours)/(in two hours)’
- b. *mmbyee ti- le- rach- ik- a (ko dakika)/(dakika)*
 9banana 9AGRs-PST- slash- STAT- FV (for minute)/(minute)
 ‘Bananas became slashed (for a minute)/ (in a minute)’
- c. *mbao ti- le- rand- ik- a (ko siku)/(siku)*
 10wood 10AGRs-PST-saw- STAT- FV (for day)/(day)
 ‘Woods got sawed (for day)/(in a day)’
- d. *mauwo wa- le- dumb-uk- a (ko masaa adadu)/(masaa adadu)*
 6flowers 6AGRs-PST- slash- STAT- FV (for hours three)/(hours three)
 ‘Flowers became cut (for three hours)/(in three hours)’

1.2.2.5 Causing event modification

- (33) a. *n’ji u- le- many- ik- a (ko-iwaanga wa-ndu)*
 3tree 3AGRs-PST- cut- STAT- FV (by calling 2-person)
 ‘The tree became cut/was capable of being cut (through/by inviting people)’
- b. *mmbyee ti- le- rach- ik- a (kweenwo nndo)*
 10banana 10AGRs-PST-slash- STAT- FV (by sharpen knife)
 ‘Bananas became slashed (by sharpening the knife)’
- c. *mbao ti- le- rand-ik- a (kweebhika kibarwo)*
 10wood 10AGRs-PST-saw-STAT- FV (by employing workers)
 ‘Woods got sawed by employing labours’

- d. *mauwo wa- le- dumb-uk- a (kweenwo kyaandu)*
 6flowers 6AGRs-PST- slash- STAT- FV (by sharpening knife)
 ‘Flowers became cut (by sharpening the knife)’

1.2.2.6 Reason clause modification

- (34) a. *n’ji u- le- many- ik- a (ko sababu ya utu)*
 3tree 3AGRs- PST- cut- STAT- FV (because of smallness)
 ‘The tree became cut/was capable of being cut (because it was small)’
- b. *mmbyee ti- le- rach- ik- a (ko sababu ya nndo)*
 10banana 10AGRs-PST- slash- STAT- FV (because of knife)
 ‘Bananas became slashed (because of the knife)’
- c. *mbao ti- le- rand-ik- a (ko sababu ya shibarwo)*
 10wood 10AGRs-PST- saw-STAT- FV (because of labours)
 ‘Woods got sawed (because of labours)’
- d. *mauwo wa- le- dumb-uk- a (ko sababu ya kyaandu)*
 6flowers 6AGRs-PST- slash- STAT- FV (because of knife)
 ‘Flowers became cut (because of the knife)’

1.2.2.7 Manner/Instrument adjunct modifications

- (35) a. *n’ji u- le- many- ik- a (ferefere)/(*na kyaara)/(ko kyaara)*
 3tree 3AGRs-PST- cut- STAT- FV (quickly)/(*by axe)/(with axe)
 ‘The tree became cut (quickly)/(*by axe)/(with/by means of axe)’
- b. *mmbyee ti- le- rach- ik- a (nicha) /(ko nndo)*
 10banana 10AGRs-PST- slash- STAT- FV (nice)/ (with knife)
 ‘Bananas became slashed (nicely)/ (by means of a knife)
- c. *mbao ti- le- rand-ik- a (ferefere)/(ko iranda)*
 10wood 10AGRs-PST- saw-STAT- FV (quickly)/ (with saw)
 ‘Woods got cut (quickly)/(by means of saw)’
- d. *mauwo wa- le- dumb-uk- a (nicha) /(ko kyaandu)*
 6flowers 6AGRs-PST- slash- STAT- FV (nice)/(with knife)
 ‘Flowers became cut (nicely/by means of a knife)’

1.2.3 Passives with PP modification

- (36) a. *n'ji u- le- many- o (na Leka)/(na kyaara)/(*ko Leka)*
 3tree 3AGRs-PST- cut- PASS (by Leka)/(with axe)/(*from Leka)
 The tree was cut (by Leka)/ (with axe/by means of axe)/(*from Leka)
- b. *mmbyee ti- le- rach- o (na waka)/(*ko waka)*
 10banana 10AGRs-PST-slash- PASS (by 2-woman)/ (to 2-woman)
 'Bananas were slashed (by women)/ (*to the ability/potentiality of women)'
- c. *mbao ti- le- rand- o (na wo-mi)/(*ko wo-mi)*
 10wood 9AGRs-PST- saw- PASS (by 2-man)/(to 2-man)
 'The wood were sawed (by men) / (*to the ability/potentiality of men)'
- d. *mauwo a- le- dumbu-o (na wa-na)/(*ko wa-na)*
 6flowers 6AGRs-PST- cut- PASS (by 2-child)/(to 2-child)
 'Flowers were cut (by children)/ (*to the ability/potentiality of children)'

1.2.3.1 Agent-oriented adverbial modification

- (37) a. *n'ji u- le- many- o (ki-rango)*
 3tree 3AGRs-PST- cut- PASS with clever
 'The tree was cut (cleverly)'
- b. *mmbyee ti- le- rach- o (ko nashi)*
 10banana 10AGRs-PST-slash- PASS (with anger)
 'Bananas were slashed (angrily)'
- c. *mbao ti- le- rand- o (ko ngufu)*
 10wood 10AGRs-PST-saw- PASS (with force)
 'Woods were sawed (forcefully)'
- d. *mauwo a- le- dumbu-o (kirango)*
 6flowers 6AGRs-PST- cut- PASS (with skill)
 'Flowers were cut (skillfully)'

1.2.3.2 The purpose clause modification

- (38) a. *n'ji u- le- many- o (kusudi ukumbwe)*
 3tree 3AGRs-PST- cut- PASS (so that it is sold)
 'The tree was cut (so that it is sold)'

- b. *mmbyee ti- le- rach- o(kusudi tikorwe)*
 10banana 10AGRs-PST-slash- PASS (so that they are cooked)
 ‘Bananas were slashed (so that they are cooked)’
- c. *mbao ti- le- rand- o (kusudi titane mmba)*
 10wood 10AGRs-PST-saw- PASS (so that they build the house)
 ‘Wood were sawed (so that they build the house)’
- d. *mauwo a- le- dumbu-o(kusudi aware)*
 6flowers 6AGRs-PST- cut- PASS (so that they blossom)
 ‘Flowers were cut (so that they blossom)’

1.2.3.3 Temporal adjuncts modification

- (39) a. *n’ji u- le- many- o (ko masaa adadu)/(masaa adadu)*
 3tree 3AGRs-PST- cut- PASS (for hours three)/(hours three)
 ‘The tree was cut (for three hours)/(in three hours)’
- b. *mmbyee ti- le- rach- o (ko dakika)/(dakika)*
 10banana 10AGRs-PST-slash- PASS (for minute)/(minute)
 ‘Bananas were slashed (for a minute)/(in a minute)’
- c. *mbao ti- le- rand- o (ko siku)/(siku)*
 10wood 10AGRs-PST-saw- PASS (for day)/(day)
 ‘The wood were sawed (for a day)/(in a day)’
- d. *mauwo a- le- dumbu-o (ko masaa adadu)/(masaa adadu)*
 6flowers 6AGRs-PST- cut- PASS (for hours three)/(hours three)
 ‘Flowers were cut (for three hours)/ (in three hours)’

1.2.3.4 Manner/Instrument adjuncts modification

- (40) a. *n’ji u- le- many- o (uwin)/(na kyaara)*
 3tree 3AGRs-PST- cut- PASS (quickly)/(by axe)
 ‘The tree was cut (quickly)/ (by means of axe)’
- b. *mmbyee ti- le- rach- o (nicha)/(na nndo)*
 10banana 10AGRs-PST-slash- PASS (nice)/(by knife)
 ‘Bananas were slashed (nicely) /(by means of a knife)’
- c. *mbao ti- le- rand- o (ferefere)/(na iranda)*

10wood 10AGRs-PST-saw- PASS (quickly)/ (by saw)
 ‘Woods were cut (quickly)/ (by means of a saw)’

- d. *mauwo* *a-* *le-* *dumbu-o (nicha)/(na kyaando)*
 6flowers 6AGRs-PST- cut- PASS (nice)/ (by knife)
 ‘Flowers were cut (nicely)/ (by means of a knife)’

1.2.4 Middle constructions

- (41) a. *ubanu* *lu-* *many-* *ik-* *a-* *a* (*uwin*)
 Eucalyptus AGRs- cut- STAT-FV- HAB (fast)
 ‘Eucalyptus (tree) cuts fast’
- b. *manduu* *wa-* *rach-* *ik-* *a-* *a* (**na wo-mi)/(*ko ngufu*)
 6leaves 6AGRs-slash-STAT- FV- HAB (by 2-man)/ (with force)
 ‘Banana leaves slash (easily) (*by men)/ (*forcefully)’
- c. *mbao* (*ta ubanu*) *ti-* *rand-ik-* *a-* *a(*na wo-mi)/(*kirango)*
 10woods (of Eucalyptus) 10AGRs-saw-STAT- FV- HAB (by 2-man)/ (with clever)
 ‘Eucalyptus woods cut (easily) (*by men)/ (*skilfully)’
- d. *mauwo* *wa-* *dumbu-k-* *a-* *a* (**na wana)/(*ko nashi*)
 6flowers 6AGRs-cut- STAT-FV- HAB (by 2-child)/ (with anger)
 ‘Flowers cut (easily) (*by children)/ (*furiously)’

1.3 *kora* ‘cook’ verbs

1.3.1 Causative variants

1.3.1.1 Agent/instrument as external arguments

- (42) a. *wa-na* (*wa)/(i-*) *le-* *kor-* *a* *kelya*
 2-child 2/9AGRs- PST- cook- FV 7food
 ‘Children/the pot cooked some food’
- b. *wa-na* (*wa)/(i-*) *le-* *sambut-* *a* *kelya*
 2-child 2/9AGRs- PST- warm- FV 7food
 ‘Children/the pot warmed the food’
- c. *wa-na* (*wa)/(i-*) *le-* *warat-* *a* *nyama*

2-child 2/9AGRs- PST- heat- FV 9meat

‘Children/the pot warmed the meat’

d. *wa-na* *(wa)/(i)-* *le-* *chemush-* *a* *soko*

2-child 2/9AGRs- PST- boil- FV 10beans

‘Children/the pot boiled the beans’

1.3.1.2 Natural force as external causer

(43) a. *??upepo* *lu* *le-* *kor-* *a* *kelya*

11wind AGRs- PST- cook -FV 7food

‘The wind cooked food’

b. *??mmbari* *u-* *le-* *sambut-* *a* *kelya*

9sunlight 9AGRs- PST- warm- FV 7food

‘The sunlight warmed the food’

c. *??mmbari* *u-* *le-* *warat-* *a* *nyama*

9sunlight 9AGRs-PST- heat- FV 9meat

‘The sunlight warmed the meat’

d. *??mmbari* *u-* *le-* *chemush-* *a* *soko*

9sunlight 9AGRs-PST- boil- FV 9beans

‘The sunlight boiled the beans’

1.3.1.3 Agent-oriented phrase modification

(44) a. *wa-na* *wa-* *le-* *kor-* *a* *kelya (kirango)*

2-woman 2AGRs-PST- cook- FV 7food (with skills)

‘The children cooked food (skillfully)’

b. *wana* *wa-* *le-* *sambut-* *a* *kelya (kirango)*

2-child 2AGRs-PST- warm- FV 7food (with skill)

‘Children warmed the food (skillfully)’

c. *womi* *wa-* *le-* *warat-* *a* *nyama (ko nashi)*

2-man 2AGRs-PST- heat- FV 9meat with anger)

‘Men warmed the meat (angrily)’

d. *waka* *wa-* *le-* *chemush-* *a* *soko (ko makusudi)*

2-woman 2AGRs-PST- boil- FV 10beans (with purpose)

‘Women boiled the beans (purposely)’

1.3.1.4 Purpose clause modification

- (45) a. *wa-na wa- le- kor-a kelya (kusudi wandu walye)*
 2-child 2AGRs-PST- cook-FV 7food (so that 2-person 2-eat)
 ‘The children cooked food (so that people (can) eat)’
- b. *wana wa- le- sambut- a kelya (kusudi walye)*
 2-child 2AGRs-PST- warm- FV 7food (so that they eat)
 ‘Children warmed the food (so that they eat)’
- c. *womi wa- le- warat- a nyama (kusudi iladee)*
 2-man 2AGRs-PST- heat- FV 9meat (so that it does not stink)
 ‘Men warmed the meat (so that it does not stink)’
- d. *waka wa- le- chemush- a soko (kusudi walye)*
 2-woman 2AGRs-PST- boil- FV 9beans (so that they eat)
 ‘Women boiled the beans (so that they eat)’

1.3.1.5 Temporal phrase modification

- (46) a. *wa-na wa- le- kor- a kelya (ko masaa adadu)/(masaa adadu)*
 2-child 2AGRs-PST- cook- FV 7food (for hoursthree)/ (three hours)
 ‘Children cooked food (for three hours)/ (in three hours)’
- b. *wana wa- le- sambut- a kelya (ko dakika)/(dakika)*
 2-child 2AGRs-PST- warm- FV 7food (for minute)/ (minute)
 ‘Children warmed the food (for a minute)/ (in a minute)’
- c. *womi wa- le- warat- a nyama (ko dakika tanu)/(dakika tanu)*
 2-man 2AGRs-PST- heat- FV 9meat (for minutes five)/(minutes five)
 ‘Men warmed the meat (for five minutes)/(in five minutes)’
- d. *waka wa- le- chemush- a soko (ko isaa)/(isaa)*
 2-woman 2AGRs-PST- boil- FV 10beans (for hour)/(hour)
 ‘Women boiled the beans (for an hour)/ (in an hour)’

1.3.1.6 Manner/Instrument adjuncts

- (47) a. *wa-na wa- le- kor- a kelya (niche)/(na nungu)*
 2-child 2AGRs-PST- cook- FV (7food well)/ (with pot)

‘Children cooked food (well)/ (by using the pot)

- b. *wana wa- le- sambut-a kelya (ferefere)/(na nungu)*
 2-child 2AGRs-PST- warm- FV 7food (quickly)/ (by pot)
 ‘Children warmed the food (quickly)/ (by means of a pot)’
- c. *womi wa- le- warat- a nyama (nicha)/(na chuma)*
 2-man 2AGRs-PST- heat- FV 9meat (nice)/(by iron)
 ‘Men warmed the meat (nicley)/ (by means of iron)’
- d. *waka wa- le- chemush- a soko (ferefere)/(na safurya)*
 2-woman 2AGRs-PST- boil- FV 9beans (quickly)/ (by pan)
 ‘Women boiled the beans (quickly)/ (by means of a pan)’

1.3.2 The anticausative variants

- (48) a. *nungu i- le- kor- ik- a kelya*
 9pot AGRs- PST- COOK-STAT-FV 7food
 ‘The pot got/became cooked food’
- b. **nungu i- le- sambu-k- a kelya*
 9pot 9AGRs-PST- warm-STAT- FV 7food
 ‘The pot got/became warmed food’
- c. **chuma i- le- warat- ik- a nyama*
 9iron 9AGRs-PST- heat- STAT- FV 9meat
 ‘The iron got/became heated meat’
- d. **nungu i- le- chemu-k- a soko*
 9pot 9AGRs-PST- boil- STAT- FV 9beans
 ‘The pot got/became boiled beans’

1.3.2.1 Prepositional Phrase modification

- (49) a. *kelya ki- le- kor- ik- a (*na wana)/ (ko wana)*
 7food 7AGRs-PST- cook- STAT-FV (by 2-child) (to 2-child)
 ‘The food became cooked (*by children)/ (to the ability/potentiality of the children)’
- b. *kelya ki- le- sambu-k- a (*na wa-na)/(ko wa-na)*
 7food 7AGRs-PST- warm-STAT- FV (by 2-child)/(to 2-child)
 ‘The food got warmed (*by children)/(to the ability/potentiality of children)’

- c. *nyama i- le- warat-ik- a (*na womi)/(ko womi)*
 9meat 9AGRs-PST- heat-STAT- FV (by 2-men)/(to 2-men)
 ‘The meat got warmed (*by men)/ (to the ability/potentiality of men)’
- d. *soko ti- le- chemu-k- a (*na waka)/(ko waka)*
 9beans 9AGRs-PST- boil- STAT-FV (by 2-woman)/(to 2-woman)
 ‘Beans became boild (*by women)/(to the ability/potentiality of women)’

1.3.2.2 Agent-oriented adverbial modification

- (50) a. *kelya ki- le- kor- ik- a (*ko makusudi)*
 7food 7AGRs-PST- cook- STAT-FV (with purpose)
 ‘The food became cooked (*with purpose/purposely)’
- b. *kelya ki- le- sambu-k- a (*kirango)*
 7food 7AGRs-PST- warm-STAT- FV (with skill)
 ‘The food got warmed (skilfully)’
- c. *nyama i- le- warat-ik- a (*ko nashi)*
 9meat 9AGRs-PST- heat-STAT- FV (with anger)
 ‘The meat got warmed (angrily)’
- d. *soko ti- le- chemu-k- a (*kirango)*
 10beans 10AGRs-PST- boil- STAT-FV (with skill)
 ‘Beans became boiled (*skilfully)’

1.3.2.3 Purpose clause modification

- (51) a. *kelya ki- le- kor- ik- a (*kusudi wa-ndu wa-lye)*
 7food 7AGRs-PST- cook- STAT-FV (so that 2-person 2-eat)
 ‘The food was cookable/got (became) cooked) (*so that people eat)’
- b. *kelya ki- le- sambu-k- a (*kusudi muna nalye)*
 7food 7AGRs-PST- warm-STAT- FV (so that child eat)
 ‘The food got warmed (*so that the child eat)’
- c. *nyama i- le- warat-ik- a (*kusudi iladee)*
 9meat 9AGRs-PST- heat-STAT- FV (so that it does not stink)
 ‘The meat got warmed (*so that it does not stink)’
- d. *soko ti- le- chemu-k- a (*kusudi wandu walye)*

10beans 10AGRs-PST-boil-STAT- FV (so that people eat)
 ‘Beans became boiled (*so that people eat)’

1.3.2.4 Temporal adjuncts modification

- (52) a. *kelya ki- le- kor- ik- a (ko masaa adadu)/(masaa adadu)*
 7food 7AGRs-PST- cook- STAT-FV (for three hours)/ (in three hours)
 ‘The food became cooked (for three hours)/ (in three hours)’
- b. *kelya ki- le- sambu-k- a (ko dakika)/(dakika)*
 7food 7AGRs-PST- warm-STAT- FV (for minute)/ (minute)
 ‘The food got warmed (for a minute)/ (in a minute)’
- c. *nyama i- le- warat- ik- a (ko dakika tanu)/(dakika tanu)*
 9meat 9AGRs-PST- heat- STAT- FV (for minute five)/(minute five)
 ‘The meat got warmed (for five minutes)/ (in five minutes)’
- d. *soko ti- le- chemu-k- a (ko isaa)/(isaa)*
 10beans 10AGRs-PST-boil- STAT- FV (for hour)/ (hour)
 ‘Beans became boiled (for an hour)/ (in an hour)’

1.3.2.5 Causing event modification

- (53) a. *kelya ki- le- kor- ik- a (ko-iurya mudo)*
 7food 7AGRs-PST- cook- STAT-FV (by-igniting 9fire)
 ‘The food became cooked by/through igniting the fire’
- b. *kelya ki- le- sambu-k- a (ko ifinikya)*
 7food 7AGRs-PST- warm-STAT- FV (by covering)
 ‘The food got warmed (by covering (it))’
- c. *nyama i- le- warat-ik- a (kweeurya mudo)*
 9meat 9AGRs-PST- heat-STAT- FV (by igniting fire)
 ‘The meat got warmed (by igniting the fire)’
- d. *soko ti- le- chemu-k- a (kweeurya mudo)*
 10beans 10AGRs-PST-boil- STAT-FV (by igniting fire)
 ‘Beans became boiled (by igniting fire)’

1.3.2.6 Reason clause modification

- (54) a. *kelya ki- le- kor- ik- a (ko sababu ya shiungo)*

7food 7AGRs-PST- cook- STAT-FV (because of spices)

‘The food became cooked/was cookable (because of spices)’

b. *kelya ki- le- sambu-k- a (ko sababu ya mudo)*

7food 7AGRs-PST- warm-STAT- FV (because of fire)

‘The food got warmed (because of fire)’

c. *nyama i- le- warat- ik- a (ko sababu ya irike)*

9meat 9AGRs-PST- heat- STAT- FV (because of heat)

‘The meat got warmed (because of heat)’

d. *soko ti- le- chemu-k- a (ko sababu ya mudo)*

10beans 10AGRs-PST-boil- STAT- FV (because of fire)

‘Beans became boiled (because of fire)’

1.3.2.7 Manner/Instrument adjunct modifications

(55) a. *kelya ki- le- kor- ik- a (uwin)/(ko nungu)*

7food 7AGRs-PST- cook- STAT-FV (quickly)/ (with pot)

‘The food became/got cooked/ (quickly)/ (by means of a pot)’

b. *kelya ki- le- sambu-k- a (nicha)/(ko nungu)*

7food 7AGRs-PST- warm-STAT- FV (nice)/(by pot)

‘The food got warmed (nicely)/ (by means of a pot)’

c. *nyama i- le- warat- ik- a (uwini)/(ko chuma)*

9meat 9AGRs-PST- heat- STAT- FV (quickly)/ (by iron)

‘The meat got warmed (quickly)/ (by means of iron)’

d. *soko ti- le- chemu-k- a (uwini)/(ko safurya)*

10beans 10AGRs-PST-boil- STAT- FV (quickly)/ (to pan)

‘Beans became boiled (quickly)/ (by means of a pan)’

1.3.3 Passives with PP modification

(56) a. *kelya ki- le- kor- o (na wa-na)/(*ko wa-na)*

7food 7AGRs-PST- cook- PASS (by 2-child)/ (to 2-child)

‘The food was cooked (by the children)/ (* to the ability/potentiality of the children)’

b. *kelya ki- le- sambut-o (na wa-na)/(*ko wa-na)*

7food 7AGRs-PST- warm-PASS- (by 2-child)/(to 2-child)

‘The food was warmed (by children)/ (*to the ability/potentiality of children)’

- c. *nyama i- le- warat-o (na womi)/(*ko womi)*
 9meat 9AGRs-PST- heat-PASS- (by 2-men)/(to 2-men)

‘The meat was warmed (by men)/ (*to the ability/potentiality of men)’

- d. *soko ti- le- chemush-o (na waka)/(*ko waka)*
 10beans 10AGRs-PST-boil- PASS (by 2-woman)/ (to 2-woman)
 ‘Beans was boild (by women)/ (*to the ability/potentiality of women)’

1.3.3.1 Agent-oriented adverbial modification

- (57) a. *kelya ki- le- kor- o (ki-rango)*
 7food 7AGRs-PST- cook- PASS (with clever)
 ‘The food was cooked cleverly’

- b. *kelya ki- le- sambut-o (ko makusudi)*
 7food 7AGRs-PST- warm-PASS (with purpose)
 ‘The food was warmed (purposely)’

- c. *nyama i- le- warat-o (ko nashi)*
 9meat 9AGRs-PST- heat-PASS (with anger)
 ‘The meat was warmed (angrily)’

- d. *soko ti- le- chemush-o (kirango)*
 10beans 10AGRs-PST-boil- PASS (with skill)
 ‘Beans was boiled (skilfully)’

1.3.3.2 The purpose clause modification

- (58) a. *kelya ki- le- kor- o (kusudi wa-na walye)*
 7food 7AGRs-PST- cook- PASS (so that 2-child 2-eat)
 ‘The food was cooked so that children (can) eat’

- b. *kelya ki- le- sambut-o (kusudi wandu walye)*
 7food 7AGRs-PST- warm-PASS (so that people eat)
 ‘The food was warmed (so that people eat)’

- c. *nyama i- le- warat-o (kusudi iladee)*
 9meat 9AGRs-PST- heat-PASS (so that it does not stink)
 ‘The meat was warmed (so that it does not stink)’

- d. *soko ti- le- chemush-o (kusudi wana walye)*
 10beans 10AGRs-PST-boil-PASS (so that children eat)
 ‘Beans was boild (so that children eat)’

1.3.3.3 Temporal adjuncts modification

- (59) a. *kelya ki- le- kor- o (ko masaa abhi)/(masaa abhi)*
 7food 7AGRs-PST- cook- PASS (for hours two)/(hours two)
 ‘The food was cooked (for two hours)/(in two hours)’
- b. *kelya ki- le- sambut-o (ko dakika)/(dakika)*
 7food 7AGRs-PST- warm-PASS (for minute)/(minute)
 ‘The food was warmed (for a minute)/ (in a minute)’
- c. *nyama i- le- warat-o (ko dakika tanu)/(dakika tanu)*
 9meat 9AGRs-PST- heat-PASS (for minute five)/(minute five)
 ‘The meat was warmed (for five minutes)/(in five minutes)’
- d. *soko ti- le- chemush-o (ko isaa)/(isaa)*
 10beans 10AGRs-PST-boil- PASS (for hour)/ (hour)
 ‘Beans was boiled (for an hour)/ (in an hour)’

1.3.3.4 Manner/Instrument adjuncts modification

- (60) a. *kelya ki- le- kor- o (nicha)/(na nungu)*
 7food 7AGRs-PST- cook- PASS (well)/(by pot)
 ‘The food was cooked (well)/(by means of a pot)’
- b. *kelya ki- le- sambut-o (uwini)/(na nungu)*
 7food 7AGRs-PST- warm-PASS (quickly)/(with pot)
 ‘The food was warmed (quickly)/ (with a pot)
- c. *nyama i- le- warat-o (nicha)/(na chuma)*
 9meat 9AGRs-PST- heat-PASS (nice)/ (by iron)
 ‘The meat was warmed (nicely)/(with iron)’
- d. *soko ti- le- chemush-o (uwini)/(na safurya)*
 10beans 10AGRs-PST-boil- PASS (quickly)/(by pan)
 ‘Beans was boiled (quickly)/ (with a pan)’

1.3.4 Middle constructions

- (61) a. *nyanyi ti- kor- ik- a- a nicha* (**na wa-na*)/
 (**kirango*)
 10vegetables 10AGRs-cook-STAT-FV- HAB well (*by 2-child)/
 (*with clever)
 Vegetables cook well (*by children)/ (*cleverly)
- b. *kelya ki- sambu-k- a- a* (**na wa-na*)/(**ko nashi*)
 7food 7AGRs-warm-STAT- FV- HAB (by 2-child)/ (with anger)
 ‘Food warms (easily) (*by children)/ (*furiously)’
- c. *nyama (ya nguku) i- warat-ik- a- a* (**na womi*/ (**ko sifa*)
 9meat (of chicken) 9AGRs-heat-STAT- FV- HAB (by 2-man)/ (with
 arrogance)
 ‘Chicken (meat) heats (easily) (*by men)/ (*arrogantly)’
- d. *malela a- chemu-k- a- a* (**na wa-na*)/ (**ko makusudi*)
 9milk 9AGRs-boil- STAT- FV- HAB (by 2-child)/(with purpose)
 ‘Milk boils (easily) (*by children)/ (*intentionally)’

1.4 *lema* ‘bend’ verbs

1.4.1 Causative variants

1.4.1.1 Agent/instrument as external arguments

- (62) a. *waka/pasi wa/i- le- lem-a masulya*
 2woman/9iron 2/9AGRs-PST-fold-FV 6blankets
 ‘The women/iron folded the blankets’
- b. *womi/iwee wa/lyi- le- lem- a mabati*
 2-man/9stone 2/9AGRs- PST- bend- FV 6iron-sheet
 ‘Men/stone bent the iron-sheet’
- c. *waka/sindanu wa/i- le- pind- a marinda*
 2-woman/9needle 2/9AGRs- PST-wrinkle- FV 6dresses
 ‘Women/needle wrinkled the dresses’

1.4.1.2 Natural force as external causer

- (63) a. *upepo lu- le- lem- a ma-sulya*

11wind 11AGRs-PST-fold- FV 6-blanket
 ‘The wind folded the blankets’

- b. *upepo* *lu-* *le-* *lem-* *a* *mabati*
 11wind 11AGRs-PST-bend- FV 6iron-sheets
 ‘The wind bent iron-sheets’

- c. ??*upepo* *lu-* *le-* *pind-* *a* *marinda*
 11wind 11AGRs-PST-wrinkle-FV 6dresses
 ‘The wind wrinkled the dresses’

1.4.1.3 Agent-oriented phrase modification

- (64) a. *wa-ka* *wa-* *le-* *lem-* *a* *masulya* (*kirango*)
 2-woman 2AGRs-PST- fold- FV 6blankets (with clever)
 ‘Women folded blankets (cleverly)’
- b. *wo-mi wa-* *le-* *lem-* *a* *mabati (ko nashi)*
 2-man 2AGRs- PST- bend- FV 6iron-sheet (with anger)
 ‘Men bent the iron-sheets (angrily)’
- c. *wa-ka* *wa-* *le-* *pind-* *a* *marinda (kirango)*
 2-woman 2AGRs-PST-wrinkle-FV 6dresses (with skill)
 ‘Women wrinkled the dresses (skilfully)’

1.4.1.4 Purpose clause modification

- (65) a. *waka* *wa-* *le-* *lem-* *a* *masulya* *kusudi wabhike*
sandu-n
 2-woman 2AGRs-PST- fold- FV 6blankets so that they keep in
 locker
 ‘Women folded blankets so that they keep in the locker’
- b. *wo-mi wa-* *le-* *lem-* *a* *mabati (kusudi wafunge)*
 2-man 2AGRs- PST- bend- FV 6iron-sheet (so that they tied)
 ‘Men bent the iron-sheets (so that they tied (them))’
- c. *wa-ka* *wa-* *le-* *pind-* *a* *marinda (kusudi waree)*
 2-woman 2AGRs-PST-wrinkle-FV 6dresses (so that they wear)
 ‘Women wrinkled the dresses (so that they wear (them))’

1.4.1.5 Temporal phrase modification

- (66) a. *wa-ka wa- le- lem-a masulya (ko masaa abhi)/(masaa abhi)*
 2-woman 2AGRs-PST- fold-FV 6blankets (for hours two)/ (hours two)
 ‘Women folded blankets (for two hours)/ (in two hours)’
- b. *wo-mi wa- le- lem- a mabati (ko isaa)/(isaa)*
 2-man 2AGRs- PST- bend- FV 6iron-sheet (for hour)/(hour)
 ‘Men bent the iron-sheets (for an hour)/ (in an hour)’
- c. *wa-ka wa- le- pind- a marinda (ko dakika)/(dakika)*
 2-woman 2AGRs-PST-wrinkle-FV 6dresses (for minute)/ (minute)
 ‘Women wrinkled the dresses (for a minute)/ (in a minute)’

1.4.1.6 Manner/Instrument adjuncts

- (67) a. *wa-ka wa- le- lem- a masulya (uwin)/(na pasi)*
 2-woman 2AGRs-PST- fold- FV 6blankets (quickly)/(by iron)
 ‘Women folded blanket (quickly)/ (by means of iron)’
- b. *wo-mi wa- le- lem- a mabati (nicha)/(ko nundo)*
 2-man 2AGRs- PST- bend- FV 6iron-sheet (nice)/ (by hammer)
 ‘Men bent the iron-sheets (nicely)/ (by means of a hammer)’
- c. *wa-ka wa- le- pind- a marinda (uwini)/(ko cheraani)*
 2-woman 2AGRs-PST-wrinkle-FV 6dresses (quickly)/ (by machine)
 ‘Women wrinkled the dresses (quickly)/ (by means of a machine)’

1.4.2 The anticausative variants

- (68) a. **waka/pasi (wa)/(i)- le- lem- ik- a masulya*
 2woman/9iron (2)/(9)AGRs- PST-fold- STAT-FV 6blankets
 ‘*Women/iron got/became folded blankets’
- b. **womi/iwee (wa)/(lyi)- le- lem- ik a mabati*
 2-man/9stone (2)/(9)AGRs- PST- bend- STAT FV 6iron-sheet
 ‘*Men/iron got/became bent the iron-sheets’
- c. **wa-ka/sindanu (wa)/(i)- le- pind- ik- a marinda*

2-woman/9needle (2)/(9)AGRs- PST- wrinkle-STAT-FV 6dresses
 ‘*Womone/needle got/became wrinkled the dresses’

1.4.2.1 Prepositional phrase modification

- (69) a. *masulya wa- le- lem- ik- a* (**na wa-na*)/(*ko wa-na*)
 6blankets 6AGRs-PST- fold- STAT-FV (by 2-child)/(to 2-child)
 ‘The blankets were foldable (*by the children)/(to the ability/possibility of the children)’
- b. *mabati wa- le- lem- ik- a* (**na wo-mi*)/(*ko womi*)
 6iron-sheets 6AGRs-PST- bend- STAT-FV (by 2-man)/(to 2-man)
 ‘Iron-sheets got bent (*by men)/(to the ability/possibility of men)’
- c. *marinda wa- le- lem- ik- a* (**na wa-ka*)/(*ko wa-ka*)
 6dresses 6AGRs-PST- fold- STAT-FV (by 2-woman)/(to 2-woman)
 ‘Dresses got wrinkled (*by women)/(to the ability/possibility of women)’

1.4.2.2 Agent-oriented adverbial modification

- (70) a. *masulya wa- le- lem- ik- a* (**ki-rango*)
 blankets 6AGRs-PST- fold- STAT-FV (*with clever)
 ‘The blankets were foldable/became folded (*cleverly)’
- b. *mabati wa- le- lem- ik- a* (**ko nashi*)
 6iron-sheets 6AGRs-PST- bend- STAT-FV (with anger)
 ‘Iron-sheets got bent (*angrily)’
- c. *marinda wa- le- lem- ik- a* (**kirango*)
 6dresses 6AGRs-PST-fold- STAT-FV (with skill)
 ‘Dresses got wrinkled (*skilfully)’

1.4.2.3 Purpose clause modification

- (71) a. *masulya wa- le- lem- ik- a* (**kusudu wasurumwe*)
 6blankets 6AGRs-PST- fold- STAT-FV (*so that they are kept)
 ‘Blankets were foldable/became folded (*so that they are kept)’
- b. *mabati wa- le- lem- ik- a* (**kusudi alemwe*)
 6iron-sheets 6AGRs-PST- bend- STAT-FV (so that they are tied up)
 ‘Iron-sheets got bent (*so that they are tied up)’

- c. *marinda wa- le- lem- ik- a* (**kusudi arawe*)
 6dresses 6AGRs-PST-fold- STAT-FV (so that they are wore)
 ‘Dresses got wrinkled (*so that they are wore)’

1.4.2.4 Temporal adjuncts modification

- (72) a. *masulya wa- le- lem- ik- a* (**ko nusu saa*)/(nusu saa)
 blankets 6AGRs-PST- fold- STAT-FV (*for half hour)/(half hour)
 ‘The blankets were foldable/became folded (*for half an hour)/(in half an hour)’
- b. *mabati wa- le- lem- ik- a* (**ko dakika*)/(dakika)
 6iron-sheets 6AGRs-PST- bend- STAT-FV (for minute)/(minute)
 ‘Iron-sheets got bent (*for a minute)/(in a minute)’
- c. *marinda wa- le- lem- ik- a* (**ko saa*)/(isaa)
 6dresses 6AGRs-PST-fold- STAT-FV (for hour)/ (hour)
 ‘Dresses got wrinkled (*for an hour)/(in an hour)’

1.4.2.5 Causing event modification

- (73) a. *masulya wa- le- lem- ik- a* (*kweebusuya muda mbele*)
 Blankets AGRs-PST- fold- STAT-FV (by pouring water mbele)
 ‘The blankets were foldable (by first pouring water (on them))’
- b. *mabati wa- le- lem- ik- a* (*ko ifunga*)
 6iron-sheets 6AGRs-PST- bend- STAT-FV (through tying)
 ‘Iron-sheets got bent (by tying (them))’
- c. *marinda wa- le- lem- ik- a* (*kweedooya fundi*)
 6dresses 6AGRs-PST-fold- STAT-FV (by taking to tailor)
 ‘Dresses got wrinkled (by taking (them) to the tailor)’

1.4.2.6 Reason clause modification

- (74) a. *masulya wa- le- lem- ik- a* (*ko sababu ya upepo*)
 blankets 6AGRs-PST- fold- STAT-FV (because of 11wind)
 ‘The blankets were foldable (because of the wind)’
- b. *mabati wa- le- lem- ik- a* (*ko sababu ya upepo*)
 6iron-sheets 6AGRs-PST- bend- STAT-FV (because of wind)
 ‘Iron-sheets got bent (because of wind)’

- c. *marinda wa- le- lem- ik- a (ko sababu ya sheraani)*
 6dresses 6AGRs-PST-fold- STAT-FV (because of machine)
 ‘Dresses got wrinkled (because of the machine)’

1.4.2.7 Manner/Instrument adjunct modifications

- (75) a. *masulya wa- le- lem- ik- a (uwini)/(ko pasi)*
 blankets 6AGRs-PST- fold- STAT-FV (quickly)/ (with iron)
 ‘The blankets were foldable/became folded (quickly)/ (with iron)’
- b. *mabati wa- le- lem- ik- a (bhicho)/(ko nundo)*
 6iron-sheets 6AGRs-PST- bend- STAT-FV (bad)/ (by hammer)
 ‘Iron-sheets got bent (badly)/ (by means of hammer)’
- c. *marinda wa- le- lem- ik- a (nicha)/(ko cheraani)*
 6dresses 6AGRs-PST-fold- STAT-FV (nice)/ (by machine)
 ‘Dresses got wrinkled (nicely)/ (by means of a machine)’

1.4.3 Passives with prepositional phrase modification

- (76) a. *masulya wa- le- lem- o (na wa-na)/(*ko wa-na)*
 6blankets 6AGRs-PST- fold- PASS (by 2-child)/(*to 2-child)
 ‘The blankets were folded (by the children)/(*to the ability of the children)’
- b. *mabati wa- le- lem- o (na wo-mi)/(*ko womi)*
 6iron-sheets 6AGRs-PST- bend- PASS (by 2-man)/ (to 2-man)
 ‘Iron-sheets were bent (by men)/ (*to the ability/possibility of men)’
- c. *marinda wa- le- lem- o (na wa-ka)/(*ko wa-ka)*
 6dresses 6AGRs-PST- fold- PASS (by 2-woman)/ (to 2-woman)
 ‘Dresses were wrinkled (by women)/ (*to the ability/possibility of women)’

1.4.3.1 Agent-oriented adverbial modification

- (77) a. *masulya wa- le- lem- o (ki-rango)*
 6blankets 6AGRs-PST- fold- PASS (with clever)
 ‘Blankets were folded (cleverly)’
- b. *mabati wa- le- lem- o (ko nashi)*
 6iron-sheets 6AGRs-PST- bend- PASS (with anger)
 ‘Iron-sheets were bent (angrily)’

- c. *marinda wa- le- lem- o (kirango)*
 6dresses 6AGRs-PST-fold- PASS (with skill)
 ‘Dresses were wrinkled (skillfully)’

1.4.3.2 The purpose clause modification

- (78) a. *masulya wa- le- lem- o (kusudi wasurumwe)*
 6blankets 6AGRs-PST- fold- PASS (so that they are kept)
 ‘Blankets were folded so that they are kept’
- b. *mabati wa- le- lem- o (kusudi afungwe)*
 6iron-sheets 6AGRs-PST- bend- PASS (so that they are tied)
 ‘Iron-sheets were bent (so that they are tied up)’
- c. *marinda wa- le- lem- o (kusudi arao)*
 6dresses 6AGRs-PST-fold- PASS (so that they are worn)
 ‘Dresses were wrinkled (so that they are worn)’

1.4.3.3 Temporal adjuncts modification

- (79) a. *masulya wa- le- lem-o (ko nusu saa)/(nusu saa)*
 6blankets 6AGRs-PST- fold-PASS (for half hour)/ (half hour)
 ‘Blankets were folded (for half an hour)/ (in half an hour)’
- b. *mabati wa- le- lem- o (ko isaa)/(isaa)*
 6iron-sheets 6AGRs-PST- bend- PASS (for hour)/ (hour)
 ‘Iron-sheets were bent (for an hour)/ (in an hour)’
- c. *marinda wa- le- lem- o (ko dakika)/(dakika)*
 6dresses 6AGRs-PST-fold- PASS (for minute)/ (minute)
 ‘Dresses were wrinkled (for a minute)/ (in a minute)’

1.4.3.4 Manner/Instrument adjuncts modification

- (80) a. *masulya wa- le- lem- o (nicha)/(ko pasi)*
 6blankets 6AGRs-PST- fold- PASS (well)/(with iron)
 ‘The blankets were folded (well)/ (with iron/by means of iron)’
- b. *mabati wa- le- lem- o (bhicho)/(ko nundo)*
 6iron-sheets 6AGRs-PST- bend- PASS (bad)/ (by hammer)
 ‘Iron-sheets were bent (badly)/ (by a hammer)’

- c. *marinda wa- le- lem- o (nicha)/(na charaani)*
 6dresses 6AGRs-PST-fold- PASS (nice)/ (by machine)
 ‘Dresses were wrinkled (nicely)/ (by machine)’

1.4.4 Middle constructions

- (81) a. *shuka ti- lem- ik- a- a nicha/(*nawa-ka)/(*kirango)*
 10sheets 10AGRs-fold- STAT-FV- HAB well (by 2-woman)/(clever)
 ‘Bed-sheets fold well (*by women)/(*cleverly)’
- b. *mabati wa-china wa- lem- ik- a- a (*na wa-na)/(*ko makusudi)*
 6iron-sheets 6-china 6AGRs-bend- STA- FV- HAB (by 2-child)/(with purpose)
 ‘Chinese iron-sheets bend (easily) (*by children)/ (*intentionally)’
- c. *shuka ti- pind- ik- a- a (*na waka)/(*kirango)*
 10sheets 10AGRs- wrinkle-STAT-FV- HAB (by 2-woman)/ (with clever)
 ‘Bed-sheets wrinkle easily (*by women)/ (*skilfully)’

2. Internally caused change of state verbs

2.1 Causative sentences

2.1.1 Agent as external argument

- (82) a. **wa-ka wa- le- war- a soko*
 2-woman 2AGRs-PST- blossom-FV 10beans
 ‘*Women blossomed the beans’n
- b. **Anna ni- a- le na-a nyanyi*
 Anna INIT- AGRs-PST- wilt-FV 10vegetables
 ‘*Anna wilted the vegetables’
- c. **wa-ka wa- le- boo nyanyi*
 2-woman 2AGRs-PST- rot 10vegetable
 ‘*Women rotted the vegetables’
- d. **wa-na wa- le- buluk- a ude*

2-child 2AGRs-PST- blister- FV boil

‘Chidren blistered the boil’

e. *wa-na wa- le- shimb-a miso*

2-child 2AGRs-PST- swell- FV eyes

‘Chidren swelled the eyes’

2.1.2 Instrument/natural force as external argument

(83) a. **Ikumbi/rain (lyi)/(i)- le- war- a soka*
 5hoe/9rain 5/9AGRs- PST- blossom-FV 10beans
 ‘*the hoe/the rain blossomed the beans’

b. **9ndoo/sunlight i/u- le- na- a nyanyi*
 bucket 9AGRs-PST- wilt- FV 10vegetables
 ‘*The bucket/sunlight wilted the vegetables’

c. **ndoo/mmbo i- le- boo nyanyi*
 9bucket/rain 9AGRs-PST- rot 10vegetable
 ‘*The bucket/rain rotted the vegetables’

d. **sindinu/irike (i)/(lyi)-le- buluk- a ude*
 9/needle/heat 9AGRs-PST- blister- FV boil
 ‘*The needle/heat blistered the boil’

e. **9mafuda/irike (nya)/(lyi)- le- shimb-a miso*
 9/cream/heat 9AGRs- PST- swell- FV eyes
 ‘*The cream/heat swelled the eyes’

2.2. The anticausative variants

(84) a. *soko ti- le- war- a*
 10beans 10AGRs-PST- blossom-FV
 ‘The beans blossomed’

b. *nyanyi ti- le- na- a*
 10vegetable 10AGRs-PST- wilt- FV
 ‘The vegetables wilted’

c. *nyanyi ti- le- boo*
 10vegetable 10AGRs-PST- decay

‘The vegetable rotted’

- d. *ude lyi- le- buluk-a*
 5boil 5AGRs-PST- blister- FV
 ‘The boil blisted’

- e. *miso wa- le- shimb- a*
 6eyes 6AGRs-PST- swell- FV
 ‘The eyes swelled’

2.2.1 Prepositional phrase modification

- (85) a. *soko ti- le- war- a* (**na mmbo*)/(?*ko mmbo*)
 10beans 10AGRs-PST- blossom-FV (by 9rain)/(?*with rain*)
 ‘Beans blossomed (*by rain)/(?*through rain*)’
- b. *nyanyi ti- le- na- a* (**na mmbari*)/(?*ko mmbari*)
 10vegetable 10AGRs-PST- wilt- FV (by 9sunlight)/(with 9sunlight)
 ‘Vegetables wilted (*by sunlight)/(?*through sunlight*)’
- c. *nyany ti- le- boo*(**na mmbo*)/(?*ko mmbo*)
 10vegetable 10AGRs-PST- decay (by rain)/(?*with rain*)
 ‘The vegetable decayed (by rain)/(?*through rain*)’
- d. *ude lyi- le- buluk-a*(**na irike*)/(?*ko irike*)
 5boil 5AGRs-PST- blister- FV (*by heat)/(?*with heat*)
 ‘The boil blisted (*by heat)/(?*through heat*)’
- e. *miso wa- le- shimb- a*(**na fumbi*)/(?*ko fumbi*)
 6eyes 6AGRs-PST- swell- FV (by dust)/(with dust)
 ‘The eyes swelled (*by dust)/(?*through dust*)’

2.2.2 Agent-oriented adverbial modification

- (86) a. *soko ti- le- war- a* (**kirango*)
 10beans 109AGRs- PST-blossom-FV (with clever)
 ‘The beans blossomed (*cleverly)’
- b. *maare a- le- na- a* (**ko makusudi*)
 6grasses 6AGRs-PST- wilt- FV (with purpose)
 ‘The grasses wilted (*purposely)’

- c. *nyanyi ti- le- boo (*ko makusudi)*
 10vegetable 10AGRs-PST-decay (with purpose)
 ‘The vegetable decayed (*purposely)’
- d. *ude lyi- le- buluk-a(*ko makusudi)*
 5boil 5AGRs-PST- blister- FV (with purpose)
 ‘The boil blisted (*purposely)’
- e. *miso wa- le- shimb- a (*ko nashi)*
 6eyes 6AGRs-PST- swell- FV (with anger)
 ‘The eyes swelled (*angrily)’

2.2.3 Purpose clause modification

- (87) a. *soko ti- le- war- a (*kusudi tingane)*
 10beans 10AGRs-PST-blossom-FV (*so that they grow)
 ‘The beans blossomed (*so that they grow)’
- b. *maare a- le- na- a (*kusudi abwyee)*
 6grasses 6AGRs-PST- wilt- FV (*so that they decay)
 ‘The grasses wilted (*so that they decay)’
- c. *nyanyi ti- le- boo (*kusudi tulakoro)*
 10vegetable 10AGRs-PST-decay (so that they are not cooked)
 ‘The vegetable rotted (*so that they are not cooked)’
- d. *ude lyi- le- buluk-a (*lyilabhabhe)*
 5boil 5AGRs-PST- blister- FV (so that it does not hurt)
 ‘The boil blisted (*so that it does not hurt)’
- e. *miso wa- le- shimb- a(*kusudi walasome)*
 6eyes 6AGRs-PST- swell- FV (so that they do not read)
 ‘The eyes swelled (so that they don not read)’

2.2.4 Temporal adjuncts modification

- (88) a. *soko ti- le- war- a (ko wiiki isadu)/(?wiiki isadu)*
 10beans 10AGRs-PST-blossom-FV (for week three)/(?week three)
 ‘Beans blossomed (for three weeks)/(?in three weeks)’
- b. *maare a- le- na- a (?ko dakika tanu)/(dakika tanu)*

6grasses 6AGRs-PST- wilt- FV (?for minute five)/(minute five)
 ‘The grasses wilted (*for five minutes)/(in five minutes)’

c. *nyanyi ti- le- boo (*ko iwikii)/(iwiki)*
 10vegetable 10AGRs-PST-decay (*for week)/(week)
 ‘The vegetable decayed (*for a week)/(in a week)’

d. *ude lyi- le- buluk-a(ko dakika)/(dakika)*
 5boil 5AGRs-PST- blister- FV (for minute)/(minute)
 ‘The boil blisted (for a minute)/(in a minute)’

e. *miso wa- le- shimb- a(ko mooka)/(mooka)*
 6eyes 6AGRs-PST- swell- FV(for year)/(year)
 ‘The eyes swelled (?for a year)/ (in a year)’

2.2.5 Causing event modification

(89) a. *soko ti- le- war- a (ko inisa kila siku)*
 10beans 10AGRs-PST-blossom-FV (by irrigating everyday)
 ‘Beans blossomed (by/through irrigating everyday)’

b. *maare a- le- na-a (kweewabhika mmbari)*
 6grasses 6AGRs-PST-wilt-FV by keeping in sunlight
 ‘The grasses wilted by keeping them in sunlight’

c. *nyanyi ti- le- boo (ko ikaba dawa)*
 10vegetable 10AGRs-PST-decay (by spraying chemicals)
 ‘The vegetable decayed (by spraying chemicals)’

d. *ude lyi- le- buluk-a (kweekaba)*
 5boil 5AGRs-PST- blister- FV (by hitting)
 ‘The boil blisted (by hitting (it))’

e. *miso wa- le- shimb- a (ko ina dawa)*
 6eyes 6AGRs-PST- swell- FV (by taking drugs)
 ‘The eyes swelled (by taking drugs)’

2.2.6 Reason clause modification

(90) a. *soko ti- le- war- a (ko sababu ekaba dawa)*
 10beans 10AGRs-PST-blossom-FV (because of spreading chemicals)

‘Beans blossomed (because of because of spreading chemicals)’

- b. *maare a- le- na-a (ko sababu ebhika mmbari)*
 6grasses 6AGRs-PST-wilt-FV (because of exposing in the sun)
 ‘The grasses wilted (because of exposing in the sunlight)’
- c. *nyanyi ti- le- boo(ko sababu ya mmbo)*
 10vegetable 10AGRs-PST-decay (because of rain)
 ‘The vegetable decayed (because of rainfall)’
- d. *ude lyi- le- buluk-a(ko sababu yeerike)*
 5boil 5AGRs-PST- blister- FV (because of heat)
 ‘The boil blisted (because of the heat)’
- e. *miso wa- le- shimb- a (ko sababu ya dawa)*
 6eyes 6AGRs-PST- swell- FV (because of drugs)
 ‘The eyes swelled (because of the drugs)’

2.2.7 Manner/Instrument adjunct modifications

- (91) a. *soko ti- le- war- a (nichu/uwin)/(*ko ikumbi)*
 10beans 10AGRs-PST-blossom-FV (well/fast)/(by hoe)
 ‘Beans blossomed (well/fast)/(*by means of a hoe)’
- b. *6maare a- le- na- a (bhicho/uwin)/(*ko kyaandu)*
 6grasses 6AGRs-PST-wilt- FV (bad/fast)/(*by knife)
 ‘The grasses wilted (badly/fast)/(*by means of a knife)’
- c. *nyany ti- le- boo(uwini)/(*ko kikabu)*
 10vegetable 10AGRs-PST-decay (fast)/(*with basket)
 ‘The vegetable decayed (fast)/(*by means of a basket)’
- d. *ude lyi- le- buluk-a(uwini)/(ko sindanu)*
 5boil 5AGRs-PST- blister- FV (fast)/ (with needle)
 ‘The boil blisted (fast)/(by means of a needle)’
- e. *miso wa- le- shimb- a (bhicho)/(*ko maritime)*
 6eyes 6AGRs-PST- swell- FV (bad)/(with glasses)
 ‘The eyes swelled (badly)/ (*by means of sunglasses)’

APPENDIX B: LOCATIVE-SUBJECT ALTERATION SENTENCES IN KIWOSO**3. Change of location/position verbs in Kiwoso****3.1 Verbs of inherently directed motions (VIDMs)****3.1.1 The agent/theme argument as subject**

- (92) a. *waka wa le- id- a duke-n*
 2-woman 2AGRs/-PST- enter- FV 5shop-LOC
 ‘Women entered (into) the shop’
- b. *wa-na wa- le- shaam-a nlime-n*
 2-child 2AGRs- PST- climb-FV 3mountain-LOC
 ‘Children climbed on the mountain’
- c. *waka wa le- somuk-a mmba*
 2-woman 2AGRs/-PST- exit- FV 9house
 ‘Women exited the house’
- d. *waka wa le- end- a kinaange*
 2-woman 2AGRs/-PST- enter- FV 7market
 ‘Women went to the market’

3.1.2 The goal/source/location argument (with locative morphology) as subject

- (93) a. *duke-n ku- le- id- a wa-ka*
 5shop-LOC 17- PST- enter- FV 2-woman
 ‘Into the shop entered women’
- b. *nlime- n ku-le-shaam-a wa-na*
 3mountain-LOC 17-PST-climb-FV 2-child
 ‘At/on the mountain climbed children’
- c. *mmba ku- le- somuk-a wa-ka*
 9house 17- PST- exit- FV 2-woman
 ‘In/from the house exited women’
- d. *kinaange ku- le- end- a wa-ka*
 7market 17- PST- enter- FV 2-woman
 ‘To the market went women’

The goal/source subject argument in passive verb constructions

- a. *duke-n ku- le- id- o na wa-ka*
 5shop-LOC 17 -PST- enter- PASS by 2-woman
 ‘Into the shop was entered by women’
- b. *nlime-n ku- le- shaam-o na wa-na*
 3mountain-LOC 17- PST- climb-PASS by 2-child
 ‘On/to the mountain was climbed by the children’
- c. *mmba ku- le- somuk-o na wa-ka*
 9house 17- PST- exit- PASS by 2-woman
 ‘In/from the house was exited by the women’
- d. *kinaange ku- le- end- o na wa-ka*
 7market 17- PST- enter- PASS by 2-woman
 ‘To the market was gone by women’

The goal/source subject argument in relative clauses

- a. *duke-n ko- id- a wa-na ku- dach- a- a*
 5shop-LOC 17- enter- FV 2-child 17- leak- FV PROG
 ‘Into the shop where children enter leaks/ (is leaking)’
- b. *nlime-n ku- le- shaam-a wa-na kuleeye*
 3mountain-LOC 17- PST- climb-FV 2-child is far
 ‘On/to the mountain where children climbed is far’
- c. *mmba ku- le- somuk-a wa-ka ku-fane*
 9house 17- PST- exit- FV 2-woman 17-dirty
 ‘In/from the house where women exited is dirty’
- d. *kinaange ku- le- end- a wa-ka ku-leeye*
 7market 17- PST- enter- PASS 2-woman 17-fara
 ‘To the market where women went is far’

3.1.3 The goal/source/location argument (without locative morphology) as subject

- (94) a. *duka lyi- le- id- a wa-ka*
 5shop 5AGRs-PST-enter- FV 2-woman
 ‘The shop (is the place where) women entered’
- b. *nlima u- le- shaam-a wa-na*

3mountain 3AGRs-PST- climb-FV 2-child
 ‘The mountain (is the place where) children climbed’

c. *mmba i- le- somuk-a wa-ka*
 9house 9AGRs/-PST- exit- FV 2-woman
 ‘The house (is the place where) women exited’

d. *kinaange ki- le- end- a wa-ka*
 7market 7AGRs/-PST- enter- FV 2-woman
 ‘Market (is the place where) women went’

The goal/source subject argument in passive verb sentences

a. *duka lyi- le- id- o na wa-ka*
 5shop 5AGRs-PST- enter- PASS by 2-woman
 ‘The shop (is the place where) was entered by women’

b. *nlima u- le- shaam-o na wa-na*
 3mountain 3AGRs-PST- climb-PASS by 2-child
 ‘The mountain (is the place where) was climbed by the children’

c. *mmba i- le- somuk-o na wa-ka*
 9house 9AGRs-PST- exit- PASS by 2-woman
 ‘The house (is the place where) was exited by the women’

d. *kinaange ki- le- end- o na wa-ka*
 7market 7AGRs-PST- enter- PASS by 2-woman
 ‘The market (is the place where) was gone by women’

The goal/source subject argument in relative clauses

(95) a. *duka lya- id- a wa-na lyi- dach-a a*
 5shop 5AGRs-enter-FV 2-child 9AGRs-leak-FV PROG
 ‘The shop (the place) where children enter leaks (is leaking)’

b. *nlima u- le- shaam-a wa-na u-leeye*
 3mountain 3AGRs-PST- climb-FV 2-child 3-far
 ‘The mountain (the place where) children climbed is high’

c. *mmba i- le- somuk-a wa-ka i-fane*

9house 9AGRs-PST- exit- FV 2-woman 9-dirty

‘The house (the place where) women exited is dirty’

- d. *kinaange* *ki-* *le-* *end-* *a* *wa-ka* *kya-shing-o*
 7market 7AGRs-PST- enter- PASS 2-woman 7-close-PASS
 ‘The market (the place where) women went is closed’

3.1.4 The locative subject prefix as expletive

- (96) a. *ku-* *le-* *id-* *a* *wa-ka* (*duke-n*)
 17- PST- enter- FV 2-woman (5shop-LOC)
 ‘There entered women (into the shop)’
- b. *ku-* *le-* *shaam-a* *wa-na(nlime- n)*
 17- PST- climb-FV 2-child (3mountain-LOC)
 ‘There climbed children (at/on the mountain)’
- c. *ku-* *le-* *somuk-a* *wa-ka* (*mmba*)
 17- PST- exit- FV 2-woman (9house)
 ‘There exited women(in/from the house)’
- d. *ku-* *le-* *end-* *a* *wa-ka* (*kinaange*)
 17- PST- enter- FV 2-woman (7market)
 ‘There went women(to the market)’

6.1.5 The objecthood status of the postverbal argument

The postverbal agent/theme argument in passive verb sentence

- (97) a. **waka* (*wa*)/(*u*)- *le-* *id-* *a* *duke- n*
 2-woman 2/9AGRs/- 7PST- enter- FV 5shop-LOC
 ‘*Women were entered into the shop’
- b. **wa-na* *wa-* *le-* *shaam-o* *nlime-n*
 2-child 2AGRs- PST- climb-PASS 3mountain-LOC
 ‘*Children were climbed to the mountain’
- c. **waka* *wa* *le-* *somuk-o* *mmba*
 2-woman 2AGRs/-PST- exit- PASS 9house
 ‘*Women were exited the house’
- d. **waka* *wa* *le-* *end-* *o* *kinaange*

2-woman 2AGRs/-PST- enter- PASS 7market

‘*Women were gone to the market’

The postverbal agent/theme argument as object agreement prefix

(98) a. **duke-n* *ku-* *le-* *wa-* *id-* *a* (*wa-ka*)

5shop-LOC 17- PST- AGRo-enter- FV (2-woman)

‘*Into the shop entered them women’

b. **nlime-* *n* *ku-le-* *wa-* *shaam-a* (*wa-na*)

3mountain-LOC 17-PST-AGRo-climb-FV 2-child

‘*On/to the mountain climbed theme the children’

c. **mbaku-* *le-* *m-* *somuk-a* *muna*

9house 17- PST- AGRo-exit- FV 1child

‘*From the house exited her/him the child’

d. **kinaange* *ku-* *le-* *wa-* *end-* *a* *wa-ka*

7market 17- PST- AGRo-enter- FV 2-woman

‘*To the market went them the women’

3.1.6. The agent/theme and the goal/location arguments as subject with other modifiers

3.1.6.1 Agent-oriented adverbial modification

The agent/theme argument with subject

(99) a. *wa-ka* *wa-* *le-* *id-* *a* *duke-n* (*kirango*)

2-woman 2AGRs-PST-enter- FV 5shop-LOC (with clever)

‘Women entered into the shop (cleverly)’

b. *wa-na* *wa-* *le-* *shaam-a* *nlima* (*ko nashi*)

2-child 2AGRs- PST- climb-FV 3mountain with (anger)

‘Children climbed the mountain (angrily)’

c. *waka* *wa* *le-* *somuk-a* *mmba* (*kirango*)

2-woman 2AGRs/-PST- exit- FV 9house (with clever)

‘Women exited the house (cleverly)’

d. *waka* *wa* *le-* *end-* *a* *kinaange* (*ko makusudi*)

2-woman 2AGRs/-PST- enter- FV 7market (with purpose)

‘Women went to the market (purposely)’

The goal/location/source argument (with locative morphology) as subject

- (100) a. *duke- n ku- le- id-a wa-ka (kirango)*
 5shop-LOC 17- PST- enter-FV 2-woman (with clever)
 ‘Into the shop entered women (cleverly)’
- b. *nlime- n ku-le-shaam-a wa-na (ko nashi)*
 3mountain-LOC 17-PST-climb-FV 2-child (with anger)
 ‘At/on the mountain climbed children (angrily)’
- c. *mmba ku- le- somuk-a wa-ka (kirango)*
 9house 17- PST- exit- FV 2-woman (with clever)
 ‘In/from the house exited women (cleverly)’
- d. *kinaange ku- le- end- a wa-ka (ko makusudi)*
 7market 17- PST- enter- FV 2-woman (with purpose)
 ‘To the market went women (purposely)’

The goal/location/source argument without locative morphology as subject

- (101) a. *duka lyi- le- id- a wa-ka (kirango)*
 5shop 5AGRs-PST- enter- FV 2-woman (with clever)
 The shop (is the place where) women entered (cleverly)
- b. *nlima u- le- shaam-a wa-na (ko nashi)*
 3mountain 3AGRs-PST- climb-FV 2-child (with anger)
 ‘The mountain (is the place where) children climbed (angrily)’
- c. *mmba i- le- somuk-a wa-ka (kirango)*
 9house 9AGRs/-PST- exit- FV 2-woman (with clever)
 ‘The house (is the place where) women exited (cleverly)’
- d. *kinaange ki- le- end- a wa-ka (ko makusudi)*
 7market 7AGRs/-PST- enter- FV 2-woman (with purpose)
 ‘Market (is the place where) women went (purposely)’

3.1.6.2 Purpose clause modification**The agent/theme argument as subject**

- (102) a. *waka wa- le- id- a duken (kusudi waure sukari)*
 2-woman 2AGRs-PST- enter- FV 5shop-LOC (so that they buy sugar)

‘Women entered into the shop (so that they buy sugar)’

- b. *wa-na* *wa-* *le-* *shaam-a* *nlima* (*kusudi watawane*)
 2-child 2AGRs- PST- climb-FV 3mountain with (so that they
 play)
 ‘Children climbed the mountain (so that they play)’

- c. *waka* *wa* *le-* *somuk-a* *mmba* (*kusudi womi wadede*)
 2-woman 2AGRs/-PST- exit- FV 9house (so that men talk)
 ‘Women exited the house (so that men talk)’

- d. *waka* *wa* *le-* *end-* *a* *kinaange* (*kusudi wakumbe soko*)
 2-woman 2AGRs/-PST- enter- FV 7market (so that they sell beans)
 ‘Women went to the market (so that they sell beans)’

The goal/location/source argument with locative morphology as subject

- (103) a. *duke-n* *ku-le-* *id-* *a* *wa-ka* (*kusudi waure sukari*)
 5shop-LOC 17-PST-enter-FV 2-woman (so that they buy sugar)
 ‘Into the shop entered women (so that they buy sugar)’
- b. *nlime- n* *ku-le-shaam-a* *wa-na* (*kusudi watawane*)
 3mountain-LOC 17-PST-climb-FV 2-child (so that they play)
 ‘At/on the mountain climbed children (so that they play)’
- c. *mmba ku-* *le-* *somuk-a* *wa-ka* (*kusudi womi wadede*)
 9house 17- PST- exit- FV 2-woman (so that men talk)
 ‘In/from the house exited women (so that men talk)’
- d. *kinaange* *ku-* *le-* *end-* *a* *wa-ka* (*kusudi wakumbe soko*)
 7market 17- PST- enter- FV 2-woman (so that they sell beans)
 ‘To the market went women (so that they sell beans)’

The goal/location/source (without locative morphology) as subject

- (104) a. *duka lyi-* *le-* *id-* *a* *wa-ka* (*kusudi waure sukari*)
 5shop 5AGRs-PST- enter- FV 2-woman (so that they buy sugar)
 ‘The shop (is the place where) women entered (so that they buy sugar)’
- b. *nlima* *u-* *le-* *shaam-a* *wa-na* (*kusudi watawane*)
 3mountain 3AGRs-PST- climb-FV 2-child (so that they play)

‘The mountain (is the place where) children climbed (so that they play)’

- c. *mmba i- le- somuk-a wa-ka (kusudi womi wadede)*
 9house 9AGRs/-PST- exit- FV 2-woman (so that men talk)
 ‘The house (is the place where) women exited (so that men talk)’
- d. *kinaange ki- le- end- a wa-ka (kusudi wakumbe soko)*
 7market 7AGRs/-PST- enter- FV 2-woman (so that they sell beans)
 ‘Market (is the place where) women went (so that they sell beans)’

3.1.6.3 Reason phrase/clause modification

The agent/theme argument as subject

- (105) a. *wa-ka wa- le- id-a duke- n (ko sababu ya mbyoo)*
 2-woman 2AGRs-PST-enter-FV 5shop-LOC (because of coldness)
 ‘Women entered into the shop (because of coldness)’
- b. *wa-na wa- le- shaam-a nlima (ko nashi)*
 2-child 2AGRs- PST- climb-FV 3mountain with (anger)
 ‘Children climbed the mountain (angrily)’
- c. *waka wa le- somuk-a mmba (kirango)*
 2-woman 2AGRs/-PST- exit- FV 9house (with clever)
 ‘Women exited the house (cleverly)’
- d. *waka wa le- end- a kinaange (ko makusudi)*
 2-woman 2AGRs/-PST- enter- FV 7market (with purpose)
 ‘Women went to the market (purposely)’

The goal/location/source argument (with locative morphology) as subject

- (106) a. *duke-n ku- le- id- a wa-ka (ko sababu ya mbyoo)*
 5shop-LOC 17- PST- enter- FV 2-woman (because of coldness)
 ‘Into the shop entered women (because of coldness)’
- b. *nlime- n ku-le-shaam-a wa-na (ko sababu yetembeya)*
 3mountain-LOC 17-PST-climb-FV 2-child (because of tour)
 ‘At/on the mountain climbed children (because of tour)’

- c. *mmba ku- le- somuk-a wa-ka (ko sababu ya musu)*
 9house 17- PST- exit- FV 2-woman (because of smoke)
 ‘In/from the house exited women (because of smoke)’
- d. *kinaange ku- le- end- a wa-ka (ko sababu ya bheenu)*
 7market 17- PST- enter- FV 2-woman (because of visitors)
 ‘To the market went women (because of the visitors)’

The goal/location/source argument (without locative morphology) as subject

- (107 a. *duka lyi- le- id- a wa-ka (ko sababu ya mbyoo)*
 5shop 5AGRs-PST- enter-FV 2-woman (because of cold)
 ‘The shop (is the place where) women entered (because of coldness)’
- b. *nlima u- le- shaam-a wa-na (ko sababu yetembeya)*
 3mountain 3AGRs-PST- climb-FV 2-child (because of tour)
 ‘The mountain (is the place where) children climbed (because of tour)’
- c. *mmba i- le- somuk-a wa-ka (ko sababu ya musu)*
 9house 9AGRs/-PST- exit- FV 2-woman (because of smoke)
 ‘The house (is the place where) women exited (because of smoke)’
- d. *kinaange ki- le- end- a wa-ka (ko sababu ya bheenu)*
 7market 7AGRs/-PST- enter- FV 2-woman (because of visitors)
 ‘Market (is the place where) women went (because of visitors)’

3.1.6.4 Manner/Instrument adjunct modification

The agent/theme argument as subject

- (108 a. *wa-ka wa- le- id- a duken (ferefere)/(na baskeli)*
 2-woman 2AGRs-PST- enter- FV 5shop-LOC (quickly)/(by bicycle)
 ‘Women entered into the shop (quickly)/(by means of a bicycle)’
- b. *wa-na wa- le- shaam-a nlima (ferefere)/(na ikari)*
 2-child 2AGRs- PST- climb-FV 3mountain with (quickly)/(by car)
 ‘Children climbed the mountain (quickly)/(by a car)’
- c. *waka wa le- somuk-a mmba (mbonngo)/(na nsenge)*

2-woman 2AGRs/-PST- exit- FV 9house (slowly)/ (by stick)

‘Women exited the house (slowly)/ (by a walking stick)’

d. *waka wa le- end- a kinaange (ferefere)/(na ikari)*

2-woman 2AGRs/-PST- enter- FV 7market (quickly)/(by car)

‘Women went to the market (quickly)/(by a car)’

The goal/location/source argument (with locative morphology) as subject

(109) a. *duke- n ku- le- id- a wa-ka (ferefere)e/ (na baskeli)*

5shop-LOC 17- PST- enter- FV 2-woman (quickly)/ (by bicycle)

‘Into the shop entered women (quickly)/ (by means of a bicycle)’

b. *nlime- n ku-le-shaam-a wa-na(ferefere)/(na ikari)*

3mountain-LOC 17-PST-climb-FV 2-child (quickly)/ (by a car)

‘At/on the mountain climbed children (quickly)/ (by a car)’

c. *mmba ku- le- somuk- a wa-ka (mbonngo)/(na nsenge)*

9house 17- PST- exit- FV 2-woman (slowly)/ (by stick)

‘In/from the house exited women (slowly)/ (by walking stick)’

d. *kinaange ku- le- end- a wa-ka(ferefere)/(na ikari)*

7market 17- PST- enter- FV 2-woman (quickly)/ (by car)

‘To the market went women (quickly)/ (by a car)’

The goal/location/source argument (without locative morphology) as subject

(110) a. *duka lyi- le- id- a wa-ka (ferefere)/(na baskeli)*

5shop 5AGRs-PST- enter- FV 2-woman (quickly)/ (by bicycle)

‘The shop (is the place where) women entered (quickly)/ (by means of a bicycle)’

b. *nlima u- le- shaam-a wa-na(ferefere)/(na ikari)*

3mountain 3AGRs-PST- climb- FV 2-child (quickly)/ (by a car)

‘The mountain (is the place where) children climbed (quickly)/ (by a car)’

c. *mmba i- le- somuk- a wa-ka (mbonngo)/(na nsenge)*

9house 9AGRs-PST- exit- FV 2-woman (slowly)/ (by stick)

‘The house (is the place where) women exited (slowly)/ (by walking stick)’

d. *kinaange ki- le- end- a wa-ka(ferefere)/(na ikari)*

7market 7AGRs-PST- enter- FV 2-woman (quickly)/ (by car)
 ‘The market (is the place where) women went (quickly)/ (by means of a car)

3.1.6.5 Temporal phrase modification

The agent/theme argument as subject

- (111) a. *baka i- le- id-a duke- n (*ko dakika)/(dakika)*
 9cat 9AGRs-PST-enter-FV 5shop-LOC (*for minute)/ (minute)
 ‘The cat entered the shop (*for a minute)/ (in a minute)’
- b. *wa-na wa- le- shaam-a nlima (ko masaa adadu)/(masaa adadu)*
 2-child 2AGRs- PST- climb-FV 3mountain (for hours three)/(hours three)
 ‘Children climbed the mountain (for three hours)/(in three hours)’
- c. *waka wa le- somuk-a mmba (ko dakika)/(dakika)*
 2-woman 2AGRs/-PST- exit- FV 9house (for minute)/(minute)
 ‘Women exited the house (for a minute)/(in a minute)’
- d. *waka wa le- end- a kinaange (ko isaa)/(isaa)*
 2-woman 2AGRs/-PST- enter- FV 7market (for hour)/(hour)
 ‘Women went to the market (for an hour)/(in an hour)’

The goal/location/source argument (with locative morphology) as subject

- (112) a. *duke- n ku- le- id- a baka (*ko dakika)/(dakika)*
 5shop-LOC 17- PST- enter- FV 9cat (*for minute)/ (minute)
 ‘Into the shop entered the cat (*for a minute)/ (in a minute)’
- b. *nlime- n ku-le-shaam-a wa-na (ko masaa adadu)/(masaa adadu)*
 3mountain-LOC 17-PST-climb-FV 2-child (for hours three)/ (hours three)
 ‘At/on the mountain climbed children (for three hours)/ (in three hours)’
- c. *mmba ku- le- somuk-a wa-ka(ko dakika)/(dakika)*
 9house 17- PST- exit- FV 2-woman (for minute)/ (minute)
 ‘In/from the house exited women (for a minute)/ (in a minute)’
- d. *kinaange ku- le- end- a wa-ka (ko isaa)/(isaa)*

7market 17- PST- enter- FV 2-woman (for hour)/(hour)
 ‘To the market went women (for an hour)/(in an hour)’

The goal/location/source argument (without locative morphology) as subject

- (113) a. *duka lyi- le- id- a baka (*ko dakika)/(dakika)*
 5shop 5AGRs-PST- enter- FV 9cat (*for minute)/(minute)
 ‘The shop (is the place where) cat entered (*for a minute)/(in a minute)’
- b. *nlima u- le- shaam-a wa-na (ko siku isadu)/(siku isadu)*
 3mountain 3AGRs-PST- climb-FV 2-child (for day three)/(day three)
 ‘The mountain (is the place where) children climbed (for three days)/(in three days)’
- c. *mmba i- le- somuk-a wa-ka(ko dakika)/(dakika)*
 9house 9AGRs/-PST- exit- FV 2-woman (for minute)/(minute)
 ‘The house (is the place where) women exited (for a minute)/(in a minute)’
- d. *kinaange ki- le- end- a wa-ka(ko isaa)/(isaa)*
 7market 7AGRs/-PST- enter- FV 2-woman (for hour)/(hour)
 ‘Market (is the place where) women went (for an hour)/(in an hour)’

3.1.6.6 Causing event modification

- (114) a. *wa-ka wa- le- id- a duke-n (ko idoota nlango)*
 2-woman 2AGRs-PST- enter- FV 5shop-LOC (by breaking door)
 ‘Women entered into the shop (by breaking the door)’
- b. *wa-na wa- le- shaam-a nlima (ko ichanga besa)*
 2-child 2AGRs- PST- climb-FV 3mountain with (by contributing money)
 ‘Children climbed the mountain (through contributing money)’
- c. *waka wa le- somuk-a mmba (ko idoota nlango)*
 2-woman 2AGRs/-PST- exit- FV 9house (by breaking the door)
 ‘Women exited the house (by breaking the door)’
- d. *waka wa le- end- a kinaange (ko ilasimisho)*
 2-woman 2AGRs/-PST- enter- FV 7market (by been forced)
 ‘Women went to the market (by been forced)’

The goal/location/source argument (with locative morphology) as subject

- (115) a. *duke-n ku- le- id- a wa-ka (kweedoota nlango)*
 5shop-LOC 17- PST- enter- FV 2-woman (by breaking door)
 ‘Into the shop entered women (by/through breaking the door)’
- b. *nlime- n ku-le-shaam-a wa-na(kweechanga besa)*
 3mountain-LOC 17-PST-climb-FV 2-child (by contributing money)
 ‘At/on the mountain climbed children (by contributing money)’
- c. *mmba ku- le- somuk-a wa-ka (kweedoota nlango)*
 9house 17- PST- exit- FV 2-woman (by breaking the door)
 ‘In/from the house exited women (by breaking the door)’
- d. *kinaange ku- le- end- a wa-ka (kweelasimisho)*
 7market 17- PST- enter- FV 2-woman (by been forced)
 ‘To the market went women (by been forced)’

The goal/location/source argument without locative morphology as subject

- (116) a. *duka lyi- le- id- a wa-ka (kweedoota nlango)*
 5shop 5AGRs-PST- enter- FV 2-woman (by breaking door)
 ‘The shop (is the place where) women entered (by/through breaking the door)’
- b. *nlima u- le- shaam-a wa-na(kweechanga besa)*
 3mountain 3AGRs-PST- climb-FV 2-child (by contributing money)
 ‘The mountain (is the place where) children climbed (by contributing money)’
- c. *mmba i- le- somuk-a wa-ka(kweedoota nlango)*
 9house 9AGRs/-PST- exit- FV 2-woman (by breaking the door)
 ‘The house (is the place where) women exited (by breaking the door)’
- d. *kinaange ki- le- end- a wa-ka(kweelasimisho)*
 7market 7AGRs/-PST- enter- FV 2-woman (by been forced)
 ‘Market (is the place where) women went (by been forced)’

3.1.7 Applicative-locative constructions

- (117) a. **waka wa- le- id- i- a duke-n*
 2-woman 2AGRs-PST- enter- APPL- FV 5shop-LOC
 ‘*Women entered by/through in the shop’

- b. **duke- n ku- le- id- i a wa-ka*
 5shop-LOC 17- PST- enter- APPL FV 2-woman
 ‘*Into the shop entered by/through women’
- c. **wa-ka wa- le- shaam-i- a nlime- n*
 2-woman 2AGRs-PST- climb- APPL-FV 3mountain-LOC
 ‘*Women climbed by on/to the mountain’
- d. **nlime-n ku- le- sham- i- a wa-ka*
 3mountain-LOC 17- PST- enter- APPL FV 2-woman
 ‘*To/on the mountaion climbed for women’

3.2 Manner of motion verbs

3.2.1 The agent/theme argument as subject

- (118) a. *wa-na wa- le- tol- a ukuta*
 2-child 2AGRs-PST-jump- FV 11fence
 ‘The children jumped (over) the fence’
- b. *wa-na wa- le- dich-a ntudu*
 2-child 2AGRs-PST- run-FV 3bush
 ‘Childern ran in the bush/jungle’
- c. *wa-na wa- le- birimik-a kitare-n*
 2-child 2AGRs-PST- roll- FV 7bed-LOC
 ‘Children rolled on bed’
- d. *wa-ka wa- le- fin- a kilabu*
 2-woman 2AGRs-PST- dance- FV 7bar
 ‘Women danced in bar’

3.2.2 The goal/source/location argument (with locative morphology) as subject

- (119) a. *ukute- n ku- le- tol- a wa-na*
 11fence-LOC 17- PST- jump- FV 2-child
 ‘Over the fence jumped children’
- b. *ntudu ku- le- dich-a wa-na*
 3bush 17- PST- run-FV 2-child
 ‘In the bush/jungle ran childern’

- c. *kitare-n ku- le- birimik-a wa-na*
7bed-LOC 17- PST- roll- FV 2-child
‘On bed rolled children’
- d. *kilabu ku- le- fin- a wa-ka*
7bar 17- PST- dance- FV 2-woman
‘In a bar danced women’

The goal/location subject argument in passive verb sentences

- a. *ukute-n ku- le- tol- o na wana*
11fence-LOC 17- PST- jump- PASS by 2-child
‘Over the fence was jumped by the children’
- b. *ntudu ku- le- dich-o na wa-na*
3bush 17-PST- run-PASS by 2-child
‘In bush/jungle was run by the children’
- c. *kitare-n ku- le- birimik-o na wa-na*
7bed-LOC 17- PST- roll- PASS by 2-child
‘On bed was rolled by the children’
- d. *kilabu ku- le- fin- o wa-ka*
7bar 17- PST- dance- PASS 2-woman
‘In a bar was danced by the women’

The goal/location subject argument in relative verb clauses

- (120) a. *ukute- n ku- le- tol- a wana ku- le-asuk-a*
11fence-loc 17- PST- jump- FV 2-child 17- PST-crack-FV
‘Over the fence where the children jumped cracked’
- b. *ntudu ku- le- dich-a wa-naku-iho simba*
3bush 17-PST- run-FV 2-child 17-be 9lion
‘In the bush/jungle where children ran there is lion’
- c. *kitare-n ku- le- birimik-a wa-na ku-booye*
7bed-LOC 17- PST- roll- FV 2-child 17-wet
‘On bed where children rolled is wet’

- d. *kilabu ku- le- fin- a wa-ka ku-le-shing-o*
 7bar 17- PST- dance- FV 2-woman 17-PST-close-PASS
 ‘In a bar where women danced is closed’

3.2.3 The goal/source/location argument (without locative morphology) as subject

- (121) a. *ukuta lu- le- tol- a wa-na*
 11fence 11AGRs-PST-jump- FV 2-child
 ‘The fence (is the place where) children jumped’

- b. *ntudu u- le- dich-a wa-na*
 3bush 3AGRs-PST- run-FV 2-child
 ‘The bush/jungle(is the place where) children ran’

- c. *kitara ki- le- birimik-a wa-na*
 7bed 7AGRs-PST- roll- FV 2-child
 ‘The bed (is the place where) children rolled’

- d. *kilabu ki- le- fin- a wa-ka*
 7bar 7AGRs-PST- dance- FV 2-woman
 ‘The bar (is the place where) women danced’

The goal/location subject argument in passive verb sentences

- (122) a. *ukuta lu- le- tol- o na wana*
 11fence 11- PST- jump- PASS by 2-child
 ‘The fence (is the place where) was jumped by the children’
- b. *ntudu u- le- dich-o na wa-na*
 3bush 17- PST- run-PASS by 2-child
 ‘The bush/jungle (is the place where)was run by the children’
- c. *kitara ki- le- birimik-o na wa-na*
 7bed 7AGRs-PST- roll- PASS by 2-child
 ‘The bed (is the place where) was rolled by the children’
- d. *kilabu ki- le- fin- o wa-ka*
 7bar 7AGRs-PST- dance- PASS 2-woman
 ‘The bar (is the place where) was danced by the women’

The goal/location subject argument in relative verb clauses

- (123) a. *ukuta lu- le- tol- a wana ku- le-asuk-a*
 11fence 11AGRs-PST-jump- FV 2-child 17- PST-crack-FV
 ‘The fence (the place where) the children jumped cracked’
- b. *ntudu u- le- dich-a wa-naku-iho simba*
 3bush 3AGRs-PST- run-FV 2-child 17-be 9lion
 ‘The bush/jungle(the place where) children ran there is lion’
- c. *kitara ki- le- birimik-a wa-na ku-booye*
 7bed 7AGRs-PST- roll- FV 2-child 17-wet
 ‘The bed (the place where) children rolled is wet’
- d. *kilabu ki- le- fin- a wa-ka ku-le-shing-o*
 7bar 7AGRs- PST- dance- FV 2-woman 17-PST-close-PASS
 ‘The bar (the place where) women danced is closed’

3.2.4 The locative subject prefix as expletive

- (124) a. *ku- le- tol- a wa-na (ukute-n)*
 17- PST- jump- FV 2-child (9wall-LOC)
 ‘There jumped children (over the wall)’
- b. *ku- le- dich- a wa-na(ntudu)*
 17- PST- run- FV 2-child (3bush)
 ‘There ran children (in bush/jungle)’
- c. *ku- le- birimik-a wa-na(kitaren)*
 17- PST- roll- FV 2-child (7bed-LOC)
 ‘There rolled children(on bed)’
- d. *ku- le- fin- a wa-ka(kilabu)*
 17- PST- dance- FV 2-woman (7bar)
 ‘There danced women(in a bar)’

3.2.5 The objecthood status of the postverbal agent/theme argument

The postverbal agent/theme argument in passive verb clause

- (125) a. **wa-na wa- le- tol- o ukuta*
 2-child 2AGRs-PST- jump- **PASS** 11fence
 ‘*Children were jumped the fence’

- b. *wa-na wa- le- dich-a ntudu*
 2-child 2AGRs-PST- run-FV 3bush
 ‘Children ran in the bush/jungle’
- c. *wa-na wa- le- birimik-a kitare-n*
 2-child 2AGRs-PST- roll- FV 7bed-LOC
 ‘Children rolled on bed’
- d. *wa-ka wa- le- fin- a kilabu*
 2-woman 2AGRs-PST- dance- FV 7bar
 ‘Women danced in bar’

The postverbal agent/theme argument as object agreement prefix

- a. **ukute-n ku- le- wa- tol- a wa-na*
 11fence-LOC 17- PST- AGRo-jump- FV 2-child
 ‘*Over the fence jumped them the children’
- b. **ntudu ku- le- wa-dich-a wa-na*
 3bush 17- PST- AGRo-run-FV 2-child
 ‘*In the bush/jungle ran them the children’
- c. **kitare-n ku- le- wa-birimik-a wa-na*
 7bed-LOC 17- PST- AGRo-roll- FV 2-child
 ‘*On bed rolled them children’
- d. **kilabuku- le- wa- fin- a wa-ka*
 7bar 17- PST- AGRo-dance- FV 2-woman
 ‘*In a bar danced them the women’

3.2.6 The agent/theme and the goal/locative arguments with other modifications

3.2.6.1 Agent-oriented adverbial modification

The agent/theme argument as subject

- (126) a. *wa-na wa- le- tol- a ukuta (kirango)*
 2-child 2AGRs-PST- jump- FV 11fence (with clever)
 ‘Children jumped the fence (cleverly)’
- b. *wa-na wa- le- dich-a ntudu (ko nashi)*

2-child 2AGRs-PST- run-FV 3bush (with anger)
 ‘Children ran in the bush/jungle (angrily)’

c. *wa-na wa- le- birimik-a kitare-n (ko makusudi)*
 2-child 2AGRs-PST- roll- FV 7bed-LOC (with purpose)
 ‘Children rolled on bed (intentionally)’

d. *wa-ka wa- le- fin- a kilabu (ko sifa)*
 2-woman 2AGRs-PST- dance- FV 7bar (with pride)
 ‘Women danced in bar (proudly)’

The goal/location/source argument with locative morphology as subject

- (127) a. *ukute-n ku- le- tol- a wa-na (kirango)*
 11fence-LOC 17- PST- jump- FV 2-child (with clever)
 ‘Over the fence jumped children (cleverly)’
- b. *ntudu ku- le- dich-a wa-na (ko nashi)*
 3bush 17- PST- run-FV 2-child (with anger)
 ‘In bush/jungleran children (angrily)’
- c. *kitare-n ku- le- birimik-a wa-na (ko makusudi)*
 7bed-LOC 17- PST- roll- FV 2-child (with purpose)
 ‘On bed rolled children (intentionally)’
- d. *kilabu ku- le- fin- a wa-ka (ko sifa)*
 7bar 17- PST- dance- FV 2-woman (with pride)
 ‘In a bar danced women (proudly)’

The goal/location/source argument without locative morphology as subject

- (128) a. *ukuta lu- le- tol- a wa-na (kirango)*
 11fence 11AGRs-PST-jump- FV 2-child (with clever)
 ‘The fence (is the place where) children jumped (cleverly)’
- b. *ntudu u- le- dich-a wa-na (ko nashi)*
 3bush 3AGRs-PST- run-FV 2-child (with anger)
 ‘The bush/jungle(is the place where) children ran (angrily)’
- c. *kitara ki- le- birimik-a wa-na (ko makusudi)*

7bed 7AGRs-PST- roll- FV 2-child (with purpose)
 ‘The bed (is the place where) children rolled (intentionally)’

- d. *kilabu ki- le- fin- a wa-ka (ko sifa)*
 7bar 7AGRs-PST- dance- FV 2-woman (with pride)
 ‘The bar (is the place where) women danced (proudly)’

3.2.6.2 Purpose clause modification

The agent/theme argument as subject

- (129) a. *wa-na wa- le- tol- a ukuta kusudi (wa-toroke)*
 2-child 2AGRs-PST- jump- FV 11fence (so that 2AGRs-escape)
 ‘Children jumped the fence (so that they escape)’
- b. *wa-na wa- le- dich-a ntudu (kusudi walalolyo)*
 2-child 2AGRs-PST- run-FV 3bush (so that they are not seen)
 ‘Children ran in the bush/jungle (so that they are not seen)’
- c. *wa-na wa- le- birimik-a kitare-n (kusudi watoroke)*
 2-child 2AGRs-PST- roll- FV 7bed-LOC (so that they escape)
 ‘Children rolled on bed (so that they escape)’
- d. *wa-ka wa- le- fin- a kilabu (kusudi waone besa)*
 2-woman 2AGRs-PST- dance- FV 7bar (so that they get money)
 ‘Women danced in bar (so that they get money)’

The goal/location/source argument (with locative morphology) as subject

- (130) a. *ukute-n ku- le- tol- a wa-na (kusudi wa-toroke)*
 11fence-LOC 17- PST- jump- FV 2-child (so that 2AGRs-escape)
 ‘Over the fence jumped children (so that they escape)’
- b. *ntudu ku- le- dich-a wa-na (kusudi walalolyo)*
 3bush 17- PST- run-FV 2-child (so that they are not seen)
 ‘In bush/jungleran children (so that they are not seen)’
- c. *kitare-n ku- le- birimik-a wa-na (kusudi watorke)*
 7bed-LOC 17- PST- roll- FV 2-child (so that they escape)
 ‘On bed rolled children (so that they escape)’

- d. *kilabu ku- le- fin- a wa-ka (kusudi waone besa)*
 7bar 17- PST- dance- FV 2-woman (so that they get money)
 ‘In a bar danced women (so that they get money)’

The goal/location/source argument (without locative morphology) as subject

- (131) a. *Ilukuta ku- le- tol- a wa-na (kusudi wa-toroke)*
 11fence-LOC 11AGRs-PST-jump- FV 2-child (so that 2AGRs-escape)
 ‘The fence (is the place where) children jumped (so that they escape)’
- b. *ntudu u- le- dich-a wa-na (kusudi walalolyo)*
 3bush 3AGRs-PST- run-FV 2-child (so that they are not seen)
 ‘The bush/jungle(is the place where) children ran (so that they are not seen)’
- c. *kitara ki- le- birimik-a wa-na (kusudi watoroke)*
 7bed 7AGRs-PST- roll- FV 2-child (so that they escape)
 ‘The bed (is the place where) children rolled (so that they escape)’
- d. *kilabu ki- le- fin- a wa-ka (kusudi waone besa)*
 7bar 7AGRs-PST- dance- FV 2-woman (so that they get money)
 ‘The bar (is the place where) women danced (so that they get money)’

3.2.6.3 Reason phrase/clause modification

The agent/theme argument as subject

- (132) a. *wa-na wa- le- tol- a ukuta (ko sababu ya mudo)*
 2-child 2AGRs-PST- jump- FV 11fence (because of fire)
 ‘The children jumped the fence (because of fire)’
- b. *wa-na wa- le- dich-a ntudu (ko sababu ya mbyoo)*
 2-child 2AGRs-PST- run-FV 3bush (because of cold)
 ‘Children ran in the bush/jungle (because of cold)’
- c. *wa-na wa- le- birimik-a kitare-n (ko sababu ya kirenge)*
 2-child 2AGRs-PST- roll- FV 7bed-LOC (because of noisy)
 ‘Children rolled on bed (because of noisy)’
- d. *wa-ka wa- le- fin- a kilabu (ko sababu ya wari)*
 2-woman 2AGRs-PST- dance- FV 7bar (because of alcoholism)

‘Women danced in bar (because of alcoholism)’

The goal/location/source argument with locative morphology as subject

- (133) a. *ukute-n ku- le- tol- a wa-na (ko sababu ya mudo)*
 11fence-LOC 17- PST- jump- FV 2-child (because of 9fire)
 ‘Over the fence jumped children (because of fire)’
- b. *ntudu ku- le- dich-a wa-na (ko sababu ya mbyoo)*
 3bush 17- PST- run-FV 2-child (because of cold)
 ‘In bush/jungleran children (because of cold)’
- c. *kitare-n ku- le- birimik-a wa-na (ko sababu ya nashi)*
 7bed-LOC 17- PST- roll- FV 2-child (because of anger)
 ‘On bed rolled children (because of anger)’
- d. *kilabu ku- le- fin- a wa-ka (ko sababu ya wari)*
 7bar 17-PST- dance- FV 2-woman (because of alcoholism)
 ‘In a bar danced women (because of alcoholism)’

The goal/location/source argument without locative morphology as subject

- (134) a. *ukuta lu- le- tol- a wa-na (ko sababu ya mudo)*
 11Fence 11AGRs-PST- jump- FV 2-child (because of 9fire)
 ‘The fence (is the place where) children jumped (because of fire)’
- b. *ntudu u- le- dich-a wa-na (ko sababu ya mbyoo)*
 3bush 3AGRs-PST- run-FV 2-child (because of cold)
 ‘The bush/jungle(is the place where) children ran (because of cold)’
- c. *kitara ki- le- birimik-a wa-na (ko sababu ya nashi)*
 7bed 7AGRs-PST- roll- FV 2-child (because of anger)
 ‘The bed (is the place where) children rolled (because of anger)’
- d. *kilabu ki- le- fin- a wa-ka (ko sababu ya wari)*
 7bar 7AGRs-PST- dance- FV 2-woman (because of alcoholism)
 ‘The bar (is the place where) women danced (because of alcoholism)’

3.2.6.4 Temporal phrase modification

The agent/theme argument as subject

- (135) a. *wa-na wa- le- tol- a ukuta (ko dakika tanu)/(dakika tanu)*
 2-child 2AGRs-PST- jump- FV fence (for minute five)/(minute five)
 ‘The children jumped the fence (for five minutes)/(in five minutes)’
- b. *wa-na wa- le- dich-a ntudu (ko isaa/)(isaa)*
 2-child 2AGRs-PST- run-FV 3bush (for hour/)(hour)
 ‘Children ran in the bush/jungle (for an hour)/ (in an hour)’
- c. *wa-na wa- le- birimik-a kitare-n (ko dakika tanu)/(dakika tanu)*
 2-child 2AGRs-PST- roll- FV 7bed-LOC (for minute five)/ (minute five)
 ‘Children rolled on bed (for five minutes)/ (in five minutes)’
- d. *wa-ka wa- le- fin- a kilabu (ko masaa/)(masaa)*
 2-woman 2AGRs-PST- dance- FV 7bar (for hours)/(hours)
 ‘Women danced in bar (for hours)/(in hours)’

The goal/location/source argument (with locative morphology) as subject

- (136) a. *ukute-n ku- le- tol- a wa-na (ko dakika)/(dakika)*
 fence-LOC 17- PST- jump- FV 2-child (for minute)/(minute)
 ‘Over the fence (is the place where) jumped children (for a minute)/ (in a minute)’
- b. *ntudu ku- le- dich- a wa-na(ko isaa/)(isaa)*
 3bush 17- PST- run- FV 2-child (for hour)/(hour)
 ‘In bush/jungleran children (for an hour)/(in an hour)’
- c. *kitare-n ku- le- birimik-a wa-na (ko dakika tanu)/(dakika tanu)*
 7bed-LOC 17- PST- roll- FV 2-child (for minute five)/ (minute five)
 ‘On bed rolled children (for five minute)/ (in five minutes)’
- d. *kilabu ku- le- fin- a wa-ka (ko masaa/)(masaa)*
 7bar 17-PST- dance- FV 2-woman (for hours)/ (hours)
 ‘In a bar danced women(for hours)/ (in hours)’

The goal/location/source argument without locative morphology as subject

- (137) a. *ukuta lu- le- tol- a wa-na (ko dakika)/(dakika)*

fence AGRs-PST- jump- FV 2-child (for minute)/(minute)
 ‘The fence (is the place where) jumped children (for a minute)/(in a minute)’

- b. *ntudu u- le- dich-a wa-na (ko isaa)/(isaa)*
 3bush 3AGRs-PST- run-FV 2-child (for hour)/(hour)
 ‘The bush/jungle(is the place where) children ran (for an hour)/(in an hour)’
- c. *kitara ki- le- birimik-a wa-na (ko dakika tanu)/(dakika tanu)*
 7bed 7AGRs-PST- roll- FV 2-child (for minute five)/(minute five)
 ‘The bed (is the place where) children rolled (for five minutes)/(in five minutes)’
- d. *kilabu ki- le- fin- a wa-ka (ko masaa)/(masaa)*
 7bar 7AGRs-PST- dance- FV 2-woman (for hours)/(hours)
 ‘The bar (is the place where) women danced (for hours)/(in hours)’

3.2.6.5 Manner/Instrument/ adjunct modification

- (138) a. *wa-na wa- le- tol- a ukuta (ferefere)/(na ngasi)*
 2-child 2AGRs-PST- jump- FV 11fence (quickly)/(by ladder)
 ‘Children jumped the fence (quickly)/(by means of a ladder)’
- b. *wa-na wa- le- dich-a ntudu (ko ngufu)/(neekari)*
 2-child 2AGRs-PST- run-FV 3bush (wit speed)/(by car)
 ‘Children ran in the bush/jungle (speedily)/(by means of a car)’
- c. *wa-na wa- le- birimik-a kitare-n (ferefere)*
 2-child 2AGRs-PST- roll- FV 7bed-LOC (fast)
 ‘Children rolled on bed (fast)’
- d. *wa-ka wa- le- fin- a kilabu (nicha)*
 2-woman 2AGRs-PST- dance- FV 7bar (nice)
 ‘Women danced in bar (nicely)’

The goal/location/source argument(with locative morphology) as subject

- (139) a. *ukute-n ku- le- tol- a wa-na (ferefere)/(na ngasi)*
 fence-LOC 17- PST- jump- FV 2-child (quickly)/(by ladder)
 ‘Over the fence jumped children (quickly)/(by means of a ladder)’
- b. *ntudu ku- le- dich-a wa-na (ko ngufu)/(neekari)*

3bush 17- PST- run-FV 2-child (with speed)/(na ikari)
 ‘In bush/jungleran children (speedily)/ (by means of a car)’

c. *kitare-n ku- le- birimik-a wa-na (ferefere)*
 7bed-LOC 17- PST- roll- FV 2-child (fast)
 ‘On bed rolled children (fast)’

d. *kilabu ku- le- fin- a wa-ka (nicha)*
 7bar 17- PST- dance- FV 2-woman (nice)
 ‘In a bar danced women (nicely)’

The goal/location/source argument(without locative morphology) as subject

- (140) a. *ukuta lu- le- tol- a wa-na (ferefere)/(na ngasi)*
 11fence11AGRs- PST- jump- FV 2-child (quickly)/ (by ladder)
 ‘The fence (is the place where) children jumped (quickly)/ (by means of a ladder)’
- b. *ntudu u- le- dich-a wa-na (ko ngufu)/(na ikari)*
 3bush 3AGRs-PST- run-FV 2-child (with speed)/ (by car)
 ‘The bush/jungle(is the place where) children ran speedily)/(by means of a car)’
- c. *kitara ki- le- birimik-a wa-na (ferefere)*
 7bed 7AGRs-PST- roll- FV 2-child (fast)
 ‘The bed (is the place where) children rolled (fast)’
- d. *kilabu ki- le- fin- a wa-ka (nicha)*
 7bar 7AGRs-PST- dance- FV 2-woman (nice)
 ‘The bar (is the place where) women danced (nicely)’

3.2.6.6 Causing event modification

- (141) a. *wa-na wa- le- tol- a ukuta (ko i- kuwaj- i- a ngasi)*
 2-child 2AGRs-PST- jump- FV 11fence (by INF- hold-APPL-FV 9ladder)
 ‘Children jumped the fence (by holding the ladder for each other)’
- b. *wa-na wa- le- dich-a ntudu (ko iowo mbyoo)*
 2-child 2AGRs-PST- run-FV 3bush (by fearing cold)
 ‘Children ran in the bush/jungle (by fearing cold)’

- c. *wa-na wa- le- birimik-a kitare-n (ko iisya kirenge)*
 2-child 2AGRs-PST- roll- FV 7bed-LOC (by hearing noisy)
 ‘Children rolled on bed (by hearing noisy)’
- d. *wa-ka wa- le- fin- a kilabu (ko ilemba wandu)*
 2-woman 2AGRs-PST- dance- FV 7bar (by fooling people)
 ‘Women danced in bar (by fooling people)’

The goal/location/source argument with locative morphology as subject

- (142) a. *ukute-n ku- le- tol- a wa-na (ko i- kuwaj- i- a ngasi)*
 11fence-LOC 17- PST- jump- FV 2-child (by holding the ladder for each other)
 ‘Over the fence jumped children (by holding the ladder for each other)’
- b. *ntudu ku- le- dich-a wa-na (kweeouwo mbyoo)*
 3bush 17-PST- run-FV 2-child (by fearing cold)
 ‘In bush/jungleran children (by fearing cold)’
- c. *kitare-n ku- le- birimik-a wa-na (ko iisya kirenge)*
 7bed-LOC 17- PST- roll- FV 2-child (by hearing noisy)
 ‘On bed rolled children (by hearing noisy)’
- d. *kilabu ku- le- fin- a wa-ka (kweelembe wandu)*
 7bar 17- PST- dance- FV 2-woman (by fooling people)
 ‘In a bar danced women (by fooling people)’

The goal/location/source argument without locative morphology as subject

- (143) a. *ukuta lu- le- tol- a wa-na (ko i- kuwaj- i- a ngasi)*
 11fence 11AGRs-PST-jump- FV 2-child (by INF- hold-APPL-FV 9ladder)
- b. *ntudu u- le- dich-a wa-na (ko iowo mbyoo)*
 3bush 3AGRs-PST- run-FV 2-child (by fearing cold)
 ‘The bush/jungle(is the place where) children ran (by fearing cold)’
- c. *kitara ki- le- birimik-a wa-na (ko iisya kirenge)*

7bed 7AGRs-PST- roll- FV 2-child (by hearing noisy)
 ‘The bed (is the place where) children rolled (by hearing noisy)’

- d. *kilabu ki- le- fin- a wa-ka (ko ilemba wandu)*
 7bar 7AGRs-PST- dance- FV 2-woman (by fooling people)
 ‘The bar (is the place where) women danced (by fooling people)’

3.2.7 Applicative-locative constructions

- (144) a. *wa-na wa- le- tol- i- a ukuta*
 2-child 2AGRs- PST- jump- APPL- FV 11fence
 ‘Children jumped (to)/ (exclusively to) the fence’
- b. *ukuta lu- le- tol- i- a wa-na*
 11fence 11AGRs-PST-jump-APPL FV 2-child
 ‘The fence (is the exclusive place) where children jumped/ to the fence jumped children’
- c. *ukute-n ku- le- tol- i a wa-na*
 11fence-LOC 17- PST- jump- APPL-FV 2-child
 ‘Over the fence (exclusively) jumped children/to the fence jumped children’

3.3 Verbs of existence

3.3.1 The agent/theme argument as subject

- (145) a. *fuko ti- ka- a marine-n*
 10moles 10AGRs-live- FV 6hole-LOC
 ‘Moles live in the holes’
- b. *wa-na wa- le- baki duke-n*
 2-child 2AGRs-PST- remain 5shop-LOC
 ‘Children remained in/at the shop’
- c. *wa-ka wa- le- bhed- a duke-n*
 2-woman 2AGRs-PST- live- FV 5shop-LOC
 ‘Women waited in/at the shop’

3.3.2. The goal/source/locative argument (with locative morphology) as subject

- (146) a. *marine-n ku- ka- a fuko*

6holes-LOC 17- live- FV 10moles

‘In the holes live moles’

- b. *duke-n ku- le- bhed-a wa-ka*
 5shop-LOC 17- PST- wait-FV 2-woman
 ‘In/at the shop waitedwomen’

- c. *duken ku- le- baki wa-na*
 5shop-LOC 17- PST- remain2-child
 ‘In/at the shop remainedchildren’

The goal/location argument in passive verb constructions

- (147) a. **marine-n ku- ka- o na fuko*
 6holes-LOC 17- live- PASS by 10moles
 ‘*In the holes were live by the moles’
- b. **duke-n ku- le- bhed-o na wa-ka*
 5shop-LOC 17- PST- wait-PASS by 2-woman
 ‘*In/at the shop was waitedby the women’
- c. **duken ku- le- baki- o na wa-na*
 5shop-LOC 17- PST- remain-PASS by 2-child
 ‘*In/at the shop was remainedby the children’

The goal/location argument in relative clauses

- (148) a. *marine-n ku- ka- a fuko ku- le- id-a mbefu*
 6holes-LOC 17- live- FV 10moles 17- PST- enter-FV 10ants
 ‘In the holes where moles live entered ants’
- b. *duke-n ku- le- bhed-a wa-ka ko- shing-o*
 5shop-LOC 17- PST- wait-F 2-woman 17- close-PASS
 ‘In/at the shop where women waitedis closed’
- c. *duke-n ku- le- baki- wa-na ko- shing-o*
 5shop-LOC 17- PST- remain 2-child 17- close-PASS
 ‘*In/at the shop where children remainedis closed’

3.3.3. The goal/source/location argument (without locative prefix) as subject

- (149) a. *marina a- ka- a fuko*
 6holes 6AGRs-live- FV 10males
 ‘The holes (is the place where) moles live’
- b. *duka lyi- le- bhed-a wa-ka*
 5shop 5AGRs-PST- wait-FV 2-woman
 ‘Shop (is the place where) women waited’
- c. *duka lyi- le- baki wa-na*
 5shop 5AGRs-PST- remain2-child
 ‘Shop (is the place where) children remained’

The goal/locative argument in relative verb clauses

- (150) a. *marina a- ka- a fuko a- le- id- a mbefu*
 6holes 6AGRs-live- FV 10moles 6AGRs-PST- enter- FV 10ants
 ‘The holes where moles live entered ants’
- b. *duka lyi- le- bhed-a wa-ka lya- shing-o*
 5shop 5AGRs-PST- wait-F 2-woman 5- close-PASS
 ‘The shop (the place where) women waitedis closed’
- c. *duka lyi- le- baki- wa-na lya- shing-o*
 5shop 5AGRs-PST- remain 2-child 5- close-PASS
 ‘The shop (the place where) children remainedis closed’

3.3.4 The locative subject prefix as expletive

- (151) a. *ku- ka- a fuko (marinen)*
 17- live- FV 10moles (6holes-LOC)
 ‘There lives moles (in the holes)’
- b. *ku- le- bhed-a wa-ka(duke-n)*
 17- PST- wait-FV2-woman (5shop-LOC)
 ‘There waitedwomen (in/at the shop)’
- c. *ku- le- baki wa-na(duke-n)*
 17- PST- remain2-child (5shop-LOC)
 ‘There remainedchildren(in/at the shop)’

3.3.5 The objecthood status of the postverbal agent/theme argument

The postverbal agent/theme argument in passive verb sentences

- (152) a. **fuko* *ti-* *ka-* *o* *marine-n*
 10moles 10AGRs-live- PASS 6hole-LOC
 ‘*Moles were lived by in the holes’
- b. **wa-na* *wa-* *le-* *baki-* *o* *duke-n*
 2-child 2AGRs-PST- remain PASS 5shop-LOC
 ‘*Children were remained by in/at the shop’
- c. **wa-ka* *wa-* *le-* *bhed-o* *duke-n*
 2-woman 2AGRs-PST- live- FV 5shop-LOC
 ‘*Women were waited for in/at the shop’

The postverbal agent/theme argument as object agreement prefix

- (153) a. **marine-n* *ku-* *ti-* *ka-* *a* *fuko*
 6holes-LOC 17- AGRo-live- FV 10moles
 ‘*In the holes live them the moles’
- b. **duke-n* *ku-* *le-* *wa-bhed-a* *wa-ka*
 5shop-LOC 17- PST- AGRo-wait-FV 2-woman
 ‘In/at the shop waitedfor them the women’
- c. **duken* *ku-* *le-* *wa-baki* *wa-na*
 5shop-LOC 17- PST- AGRo-remain 2-child
 ‘*In/at the shop remainedthem the children’

3.3.6 The agent/theme and goal/location arguments with other modifiers

3.3.6.1 Agent-oriented adverbial modification

The agent/theme argument as subject

- (154) a. *fuko* *ti-* *ka-* *a* *marine-n* *(kirango)*
 10moles- 10AGRs-live- FV 6holes-LOC (with skill)
 ‘Moles live in the holes (cleverly)’
- b. *wa-na* *wa-* *le-* *baki* *duke-n* *(ko makusudi)*
 2-child 2AGRs-PST- remain 5shop-LOC (with purpose)
 ‘Children remained in/at the shop (intentionally)’

- c. *wa-ka wa- le- bhed- a duke-n (ko nashi)*
 2-woman 2AGRs-PST- live- FV 5shop-LOC (with anger)
 ‘Women waited in/at the shop (furiously)’

The goal/location/source argument (with locative morphology) as subject

- (155) a. *marine-n ku- ka- a fuko (kirango)*
 6holes-LOC 17- live- FV 10moles (with skill)
 ‘In the holes live moles (cleverly)’
- b. *duke-n ku- le- bhed-a wa-ka (ko nashi)*
 5shop-LOC 17- PST- wait-FV 2-woman (with anger)
 ‘In/at the shop waited women (angrily)’
- c. *duken ku- le- baki wa-na (ko makusudi)*
 5shop-LOC 17- PST- remain2-child (with purpose)
 ‘In/at the shop remained children (intentionally)’

The goal/location/source argument without locative morphology as subject

- (156) a. *marina a- ka- a fuko (kirango)*
 6holes 9AGRs-live- FV 10moles (with skill)
 ‘The holes (is the place where) moles live (cleverly)’
- b. *duka lyi- le- bhed-a wa-ka (ko nashi)*
 5shop 5AGRs-PST- wait-FV 2-woman (with anger)
 ‘Shop (is the place where) women waited (angrily)’
- c. *duka lyi- le- baki wa-na (ko makusudi)*
 5shop 5AGRs-PST- remain2-child (with purpose)
 ‘Shop (is the place where) children remained (intentionally)’

3.3.6.2 Purpose clause modification

The agent/theme argument as subject

- (157) a. *fuko ti- ka- a marine-n (kusudi ti- la- wad- w- e)*
 10moles 10AGRs-live- FV 6holes LOC (so that 10AGRs-NEG-catch-PASS-FV)
 ‘Moles live in the holes (so that they are not caught)’

- b. *wa-na wa- le- baki duke-n (kusudi waringe)*
 2-child 2AGRs-PST- remain 5shop-LOC (so that they guard)
 ‘Children remained in/at the shop (so that they guard)’
- c. *wa-ka wa- le- bhed- a duke-n (kusudi waladeke)*
 2-woman 2AGRs-PST- live- FV 5shop-LOC (so that they do not get lost)
 ‘Women waited in/at the shop (so that they do not get lost)’

The goal/location/source (with locative morphology) as subject

- (158) a. *marina a- ka- a fuko (kusudi ti- la- wad- w- e)*
 6holes 6AGRs-live- FV 10moles (so that 10AGRs-NEG-catch-PASS-FV)
 ‘The holes (is the place where) moles live (so that they are not caught)’
- b. *duke-n ku- le- bhed-a wa-ka (kusudi waladeke)*
 5shop-LOC 17- PST- wait-FV 2-woman (so that they do not get lost)
 ‘In/at the shop waited women (so that they do not get lost)’
- c. *duken ku- le- baki wa-na (kusudi waringe)*
 5shop-LOC 17- PST- remain 2-child (so that they guard)
 ‘In/at the shop remained children (so that they guard)’

The goal/location/source argument (without locative morphology) as subject

- (159) a. *marine-n ku- ka- a fuko (kusudi ti- la- wad- w- e)*
 6holes-LOC 17- live- FV 10moles (so that 10AGRs-NEG-catch-PASS-FV)
 ‘In the holes live moles (so that they are not caught)’
- b. *duka lyi- le- bhed-a wa-ka (kusudi waladeke)*
 5shop 5AGRs-PST- wait-FV 2-woman (so that they do not get lost)
 ‘Shop (is the place where) women waited (so that they do not get lost)’
- c. *duka lyi- le- baki wa-na (kusudi waringe)*
 5shop 5AGRs-PST- remain 2-child (so that they guard)
 ‘Shop (is the place where) children remained (so that they guard)’

3.3.6.3 Reason clause modification

The agent/theme argument as subject

- (160) a. *fuka ti- ka- a marine-n (ko sababu ya mmbari)*
 10moles 10AGRs-live- FV 6holes-LOC (because of 9sunlight)
 ‘Moles live in the holes (because of sunlight)’
- b. *wa-na wa- le- baki duke-n (ko sababu ya mmbo)*
 2-child 2AGRs-PST- remain 5shop-LOC (because of rain)
 ‘Children remained in/at the shop (because of the rain)’
- c. *wa-ka wa- le- bhed- a duke-n (ko sababu ya wiinu)*
 2-woman 2AGRs-PST- live- FV 5shop-LOC (because of unfamiliarity)
 ‘Women waited in/at the shop (because of unfamiliarity)’

The goal/location/source argument (with locative morphology) as subject

- (161) a. *Marine-n- ku- ka- a fuko (ko sababu ya mmbari)*
 6holes-LOC 17- live- FV 10moles (because of 9sunlight)
 ‘In the holes live moles (because of sunlight)’
- b. *duke-n ku- le- bhed-a wa-ka (kosababu ya wiinu)*
 5shop-LOC 17- PST- wait-FV 2-woman (because of unfamiliarity)
 ‘In/at the shop waited women (because of unfamiliarity)’
- c. *duken ku- le- baki wa-na (ko sababu ya mmbo)*
 5shop-LOC 17- PST- remain 2-child (because of rain)
 ‘In/at the shop remained children (because of the rain)’

The goal/location/source argument (without locative morphology) as subject

- (162) a. *marina a- ka- a fuko (ko sababu ya mmbari)*
 6holes 6AGRs-live- FV 10moles (because of sunlight)
 ‘The holes (is the place where) moles live (because of sunlight)’
- b. *duka lyi- le- bhed-a wa-ka (ko sababu ya wiinu)*
 5shop 5AGRs-PST- wait-FV 2-woman (because of unfamiliarity)
 ‘Shop (is the place where) women waited (because of unfamiliarity)’
- c. *duka lyi- le- baki wa-na (kosababu ya mmbo)*
 5shop 5AGRs-PST- remain 2-child (because of rain)

‘Shop (is the place where) children remained (because of the rain)’

3.3.6.4 Manner/Instrument/adjuncts modification

The agent/theme argument as subject

- (163) a. *fuko ti- ka- a marine-n (sau)*
 10moles 10AGRs-live- FV 6holes-LOC (quietly)
 ‘Moles live in the holes (quietly)’
- b. *waka wa- le- baki duke- n (ko siri)/ (na risasi)*
 2-woman 2AGRs-PST- remain 5shop-LOC (with secret)/ (by 9gun)
 ‘Women remain at the shop (secretly)/ (by means of a gun)’
- c. *wa-ka wa- le- bhed- a duke-n (sau)*
 2-woman 2AGRs-PST- live- FV 5shop-LOC (quietly)
 ‘Women waited in/at the shop (quietly)’

The goal/location/source argument (with locative morphology) as subject

- (164) a. *marinen ku- ka- a fuko (sau)*
 6holes-LOC 17- live- FV 10moles (quietly)
 ‘In the holes live moles (quietly)’
- b. *duke-n- ku- le- baki wa-ka (ko siri)/ (na risasi)*
 5shop-LOC 17- PST- remain 2-woman (with secret)/ (by gun)
 ‘At the shop remained women (secretly)/ (by means of a gun)’
- b. *duke-n ku- le- bhed-a wa-ka (sau)*
 5shop-LOC 17- PST- wait-FV 2-woman (quietly)
 ‘In/at the shop waited women (quietly)’

The goal/location/source argument without locative morphology as subject

- (165) a. *marina wa ka- a fuko (sau)*
 6holes 6AGRs-live- FV 10moles (quietly)
 ‘Holes (is the place where) moles live (quietly)’
- b. *duka lyi- le- bhed-a wa-ka (ko siri)/(na risasi)*
 5shop 5AGRs-PST- wait-FV 2-woman (with secret)/(by gun)
 ‘Shop (is the place where) women waited (secretly)/(by means of a gun)’
- c. *duka lyi- le- baki wa-na (sau)*

5shop 5AGRs-PST- remain 2-child (quietly)

‘Shop (is the place where) children remained (quietly)’

3.3.6.5 Temporal adverbials

The agent/theme argument as subject

- (166) a. *fuko ti- ka- a marine-n (*ko iwiiki)/(*iwiiki)*
 10moles 10AGRs-live- FV 6holes-LOC (*for week)/ (week)
 ‘Moles live in the holes (*for a week)/ (*in a week)’
- b. *wa-na wa- le- baki duke-n (ko isaa)/(isaa)*
 2-child 2AGRs-PST- remain 5shop-LOC (for hour)/(hour)
 ‘Children remained in/at the shop (for an hour)/ (in an hour)’
- c. *wa-ka wa- le- bhed- a duke-n (ko masaa adadu)/ (masaa adadu)*
 2-woman 2AGRs-PST- live- FV 5shop-LOC (for hours three)/ (hours three)
 ‘Women waited in/at the shop (for three hours)/ (in three hours)’

The goal/location/source argument (with locative morphology) as subject

- (167) a. *Marinen ku- ka- a fuko (*ko iwiiki)/(*iwiiki)*
 6holes-LOC 17- live- FV 10moles (*for week)/ (*week)
 ‘In the holes live moles (*for a week)/ (*in a week)’
- b. *duke-n ku- le- bhed-a wa-ka (ko masaa adadu)/(masaa adadu)*
 5shop-LOC 17- PST- wait-FV2-woman (for hours three)/ (hours three)
 ‘In/at the shop waitedwomen (for three hours)/ (in three hours)’
- c. *duken ku- le- baki wa-na (ko isaa)/(isaa)*
 5shop-LOC 17- PST- remain 2-child (for hour)/(hour)
 ‘In/at the shop remainedchildren (for an hour)/ (in an hour)’

The goal/location/source argument without locative morphology as subject

- (168) a. *marina a- ka- a fuko (*ko iwiiki)/(*iwiiki)*
 6holes 6AGRs-live- FV 10moles (*for week)/(*in week)
 ‘The holes (is the place where) moles live/reside) (*for a week)/ (*in a week)’
- b. *duka lyi- le- bhed-a wa-ka (ko masaa adadu)/(masaa adadu)*

5shop 5AGRs-PST- wait-FV 2-woman (for hours three)/(hours three)
 ‘Shop (is the place where) women waited (for three hours)/(in three hours)’

- c. *duka lyi- le- baki wa-na (ko isaa)/(isaa)*
 5shop 5AGRs-PST- remain2-child (for hour)/(in hour)
 ‘Shop (is the place where) children remained (for an hour)/(in an hour)’

3.3.6.6 Causing event modification

The agent/theme argument as subject

- (169) a. *fuko ti- ka- a marine-n (ko i-ouo i-wad-o)*
 10moles 10AGRs-live- FV 6holes-LOC (by INF-fear INF-catch-PASS)
 ‘Moles live in the holes (due to fear of been caught)’
- b. *wa-na wa- le- baki duke-n (ko iouwo wandu)*
 2-child 2AGRs-PST- remain 5shop-LOC (by fearing people)
 ‘Children remained in/at the shop (by fearing people)’
- c. *wa-ka wa- le- bhed- a duke-n (ko ideda na wana)*
 2-woman 2AGRs-PST- live- FV 5shop-LOC (by talking to children)
 ‘Women waited in/at the shop (through talking to children)’

The goal/location/source argument (with locative morphology) as subject

- (170) a. *marinen- ku- ka- a fuko (ko i-ouo i-wad-o)*
 6holes-LOC 17- live- FV 10moles (by INF-fear INF-catch-PASS)
 ‘In the holes live moles (due to fear of been caught)’
- b. *duke-n ku- le- bhed-a wa-ka (kweewo wandu)*
 5shop-LOC 17- PST- wait-FV 2-woman (by fearing people)
 ‘In/at the shop waited women (by fearing people)’
- c. *duken ku- le- baki wa-ka (ko idade na wana)*
 5shop-LOC 17- PST- remain2-woman (by talking to children)
 ‘In/at the shop remained women (through talking to children)’

The goal/location/source argument (without locative morphology) as subject

- (171) a. *marina a- ka- a fuko (ko i-ouo i-wad-o)*
 6holes 6AGRs-live- FV 10moles (by INF-fear INF-catch-PASS)
 ‘The holes (is the place where) moles live (due to fear of been caught)’

- b. *duka lyi- le- bhed-a wa-ka (kweeowo wandu)*
 5shop 5AGRs-PST- wait-FV 2-woman (by fearing people)
 ‘Shop (is the place where) women waited (by fearing people)’
- c. *duka lyi- le- baki wa-ka (kweedededa na wana)*
 5shop 5AGRs-PST- remain 2-woman (by talking to children)
 ‘Shop (is the place where) children remained (by talking to children)’

3.3.7 Applicative-locative constructions

- (172) a. **fuko ti- ka- i a marine-n*
 10moles 10AGRs-live- APPL- FV 6holes-LOC
 ‘*The moles lived for in holes’
- b. **marine-n ku- ka- i- a fuko*
 6holes LOC 17- live- APPL- FV 10moles
 ‘*In the holes lived for the moles’
- c. **marina a- ka- i- a fuko*
 6holes 6AGRs- live- APPL- FV 10moles
 ‘*Holes (are the places where) lived for moles’

3.4 Verbs of spatial configuration

3.4.1 The agent/theme argument argument as subject

- (173) a. *wa-ka wa- le- damy- a kidi-n*
 2-woman 2AGRs-PST- sit- FV 7chair-LOC
 ‘Women sat on the chair’
- b. *wa-na wa- le- orok- a duke-n*
 2-child 2AGRs-PST- stand- FV 5shop-LOC
 ‘Children stood in/at the shop’
- c. *waka wa- le- ongom-a nfongo-n*
 2-woman 2AGRs-PST- bend- FV 3stream-LOC
 ‘Women bent to the stream’
- d. *wa-na wa- le- mas-a picha ukute-n*
 2-child 2AGRs-PST- hang-FV 9photo 11wall-LOC
 ‘Children hung a photo on a wall’

3.4.2 Goal/source/locative (with locative morphology) as subject

- (174) a. *kidi-n ku- le- damy- a wa-ka*
 7chair-LOC 17- PST- sit- FV 2-woman
 ‘On the chair sat women’
- b. *duke-n ku- le- orok- a wa-na*
 5shop-LOC 17- PST- stand- FV -child
 ‘In/at the shop stood women’
- c. *nfongo-n ku- le- ongom-a waka*
 3stream-LOC 17- PST- bend- FV 2-woman
 ‘To the stream bent women’
- d. *ukuten ku- le- mas- a picha*
 11wall-LOC 17- PST- hang- FV 9photo
 ‘The wall hung a photo’

The goal/location subject argument in passive verb constructions

- (175) a. *kidi-n ku- le- damy- o na wa-ka*
 7chair-LOC 17- PST- sit- PASS by 2-woman
 ‘On the chair was sat by the women’
- b. *duke-n ku- le- orok- o na wa-na*
 5shop-LOC 17- PST- stand- PASS by 2-child
 ‘In/at the shop was stood by the children’
- c. *nfongo-n ku- le- ongom-o na waka*
 3stream-LOC 17- PST- bend- PASS by 2-woman
 ‘To the stream was bent by the women’
- d. *ukuten ku- le- mas- o picha*
 11wall-LOC 17- PST- hang- PASS 9photo
 ‘The wall was hung a photo’

The goal/location subject argument in relative clauses

- (176) a. *kidin ku- le- dam- a wa-ka kweedelelala*
 7chair 17- PST- sit- FV 2-woman there was cold
 ‘On the chair where women sat was cold’

- b. *duke-n ku- le- orok- a wa-na ko-shing-o*
 5shop-LOC 17- PST- stand- FV 2-child 17-close-PASS
 ‘In/at the shop where children stood is closed’
- c. *nfongo-n ku-le- ongom-a wa-ka ku-le-um-a*
 3stream-LOC 17-PST-bend- FV 2-woman 17-PST-dry-FV
 ‘In/at the stream where women bent dried’
- d. *ukute-n ku- le- mas- a picha ko-dook-a*
 11wall-LOC 17- PST- hang- FV 9photo 17-collapse-FV
 ‘On/over the wall where photo hung collapsed’

3.4.3 The goal/source/locative argument (without locative morphology) as subject

- (177) a. *kidi ki- le- damy- a wa-ka*
 7chair 7AGRs-PST- sit -FV 2-woman
 ‘The chair (is the place where) women sat’
- b. *duka lyi- le- orok- a wa-na*
 5shop 5AGRs-PST- stand- FV -child
 ‘The shop (is the place where) children stood’
- c. *nfongo u- le- ongom-a waka*
 3stream 3AGRs-PST- bend- FV 2-woman
 ‘The stream (is the place where) women bent’
- d. *ukuta lu- le- mas- a picha*
 11wall 11AGRs-PST- hang- FV 9photo
 ‘The wall (is the place where) a photo hung’

The goal/location subject argument in passive verb constructions

- (178) a. *kidi ki- le- damy- o na wa-ka*
 7chair 7AGRs-PST- sit- PASS by 2-woman
 ‘The chair (is the place where) was sat by the women’
- b. *duka lyi- le- orok- o na wa-na*
 5shop 5AGRs-PST- stand- PASS by 2-child
 ‘The shop (is the place where) was stood by the children’
- c. *nfongo u- le- ongom-o na waka*

3stream 3AGRs-PST- bend- PASS by 2-woman
 ‘The stream (is the place where) was bent by the women’

- d. *ukuta* *lu-* *le-* *mas-* *o* *picha*
 11wall 11AGRs- PST- hang- PASS 9photo
 ‘The wall (is the place where) was hung the photo’

The goal/locative argument in relative verb clauses

- (179) a. *kidi* *ki-* *le-* *damy-* *a* *wa-ka* *ke-* *boo-ye*
 7chair 7AGRs-PST- sit- FV 2-woman 7AGRs-wet-
 ‘The chair (the place where) sat women was wet’
- b. *duka* *lyi-* *le-* *orok-* *a* *wa-na* *lya-shingo*
 5shop 5AGRs-PST- stand- FV 2-child 3-close-PASS
 ‘The shop (the place where) stood children is closed’
- c. *nfongo* *u-* *le-* *ongom-a* *wa-ka* *u-le-um-a*
 3stream 3AGRs-PST- bend- FV 2-woman 3-PST-dry-FV
 ‘The stream (the place where) bent women dried’
- d. *ukuta* *lu-* *le-* *mas-* *a* *picha* *lo-dook-a*
 11wall 11AGRs- PST- hang- FV 9photo 11-collapse-FV
 ‘The wall (the place where) hung photo collapsed’

3.4.4 The locative subject prefix as expletive

- (180) a. *ku-* *le-* *damy-* *a* *wa-ka* (*kidi-n*)
 17- PST- sit- FV 2-woman (9chair-LOC)
 ‘There sat women (on the chair)’
- b. *ku-* *le-* *orok-* *a* *wa-na* (*duke-n*)
 17- PST- stand- FV -child (5shop-LOC)
 ‘There stood women (in/at the shop)’
- c. *ku-* *le-* *ongom-a* *waka(nfongo-n)*
 17- PST- bend- FV 2-woman (3stream-LOC)
 ‘There bent women(to the stream)’
- d. *ku-* *le-* *mas-* *a* *picha* (*ukuten*)
 17- PST-hang- FV 9photo (11wall-LOC)

‘There hung a photo (on the wall)

3.4.5 The objecthood status of the postverbal agent/theme argument

The postverbal agent/theme argument in passive verb constructions

- (181) a. **wa-ka* *wa-* *le-* *damy-* *o* *kidi-n*
 2-woman 2AGRs-PST- sit- PASS 7chair-LOC
 ‘*Women were sat for on chair’
- b. **wa-na* *wa-* *le-* *orok-* *o* *duke-n*
 2-child 2AGRs-PST- stand- PASS 5shop-LOC
 ‘*Children were stood in/at by the shop’
- c. **waka* *wa-* *le-* *ongom-o* *nfongo-n*
 2-woman 2AGRs-PST- bend- PASS 3stream-LOC
 ‘*Women were bent by to the stream’
- d. **wa-na* *wa-* *le-* *mas-o* *picha ukute-n*
 2-child 2AGRs-PST- hang-PASS 9photo 11wall-LOC
 ‘*Children were hung the photo by on a wall’

The postverbal agent/theme argument as object agreement prefix

- (182) a. **kidi-* *n* *ku-* *le-* *wa-* *damy-* *a* *wa-ka*
 7chair-LOC 17 -PST- AGRo sit- FV by 2-woman
 ‘*On the chair sat them the women’
- b. **duke-n* *ku-* *le-* *wa-* *orok-* *a* *wa-na*
 5shop-LOC 17- PST- AGRo-stand- FV 2-child
 ‘*In/at the shop stood them the children’
- c. **nfongo-n* *ku-* *le-* *wa-ongom-a* *wa-ka*
 3stream-LOC 17- PST- AGRo-bend- PASS 2-woman
 ‘*To the stream bent them the women’
- d. **ukuten* *ku-* *le-* *i-* *mas-a* *picha*
 11wall-LOC 17- PST- AGRo-hang- FV 9photo
 ‘*The wall hung it a photo’

3.4.6 The agent/theme and goal/location arguments with other modifiers

3.4.6.1 Agent-oriented adverbial modification

The agent/theme argument as subject

- (183) a. *wa-ka wa- le- damy- a kidi- n (ko nashi)*
 2-woman 2AGRs-PST- sit- FV 7chair-LOC (with angry)
 ‘Women sat on the chair (furiously)’
- b. *wa-na wa- le- orok- a duke-n (ko makusudi)*
 2-child 2AGRs-PST- stand- FV 5shop-LOC (with purpose)
 ‘Children stood in/at the shop (intentionally)’
- c. *waka wa- le- ongom-a nfongo-n (ko sifa)*
 2-woman 2AGRs-PST- bend- FV 3stream-LOC (with pride)
 ‘Women bent to the stream (proudly)’
- d. *wa-na wa- le- mas-a picha ukute-n (kirango)*
 2-child 2AGRs-PST- hang-FV 9photo 11wall-LOC (with clever)
 ‘Children hung a photo on a wall (cleverly)’

The goal/location/source argument (with locative morphology) as subject

- (184) a. *kidi- n ku-le- damy- a wa-ka (ko nashi)*
 7chair-LOC 17-PST-sit- FV 2-woman (with anger)
 ‘On the chair sat women (furiously)’
- b. *duke-n ku- le- orok- a wa-na (ko makusudi)*
 5shop-LOC 17- PST- stand- FV -child (with purpose)
 ‘In/at the shop stood women (intentionally)’
- c. *nfongo-n ku- le- ongom-a waka (ko sifa)*
 3stream-LOC 17- PST- bend- FV 2-woman (with pride)
 ‘To the stream bent women (proudly)’
- d. *ukuten ku- le- mas- a picha (kirango)*
 11wall-LOC 17- PST- hang- FV 9photo (with clever)
 ‘The wall hung a photo (cleverly)’

The goal/location/source argument without locative morphology as subject

- (185) a. *kidi ki- le- damy- a wa-ka (ko nashi)*
 7chair 7AGRs-PST- sit- FV 2-woman (with anger)
 ‘The chair (is the place where) women sat (furiously)’

- b. *duka lyi- le- orok- a wa-na (ko makusudi)*
 5shop 5AGRs-PST- stand- FV -child (with purpose)
 ‘The shop (is the place where) children stood (intentionally)’
- c. *nfongo u- le- ongom-a waka (ko sifa)*
 3stream 3AGRs-PST- bend- FV 2-woman (with pride)
 ‘The stream (is the place where) women bent (proudly)’
- d. *ukuta lu- le- mas- a picha (kirango)*
 11wall 11AGRs-PST- hang- FV 9photo (with cleverly)
 ‘The wall (is the place where) a photo hung (cleverly)’

3.4.6.2 Purpose clause modification

The agent/theme argument as subject

- (186) a. *wa-ka wa- le- damy- a kidi-n (kusudi wa-dede)*
 2-woman 2AGRs-PST- sit- FV 7chair-LOC (so that 2AGRs-talk)
 ‘Women sat on the chair (so that they (can) talk)’
- b. *wa-na wa- le- orok- a duke-n (kusudi waure chumbi)*
 2-child 2AGRs-PST- stand- FV 5shop-LOC (so that they buy salt)
 ‘Children stood in/at the shop (so that they buy salt)’
- c. *waka wa- le- ongom-a nfongo-n (kusudi wane muda)*
 2-woman 2AGRs-PST- bend- FV 3stream-LOC (so that they drink water)
 ‘Women bent to the stream (so that they drink water)’
- d. *wa-na wa- le- mas-a picha ukute-n (kusudi ilolyo)*
 2-child 2AGRs-PST- hang-FV 9photo 11wall-LOC (so that it is seen)
 ‘Children hung a photo on a wall (so that it is seen)’

The goal/location/source argument with locative morphology as subject

- (187) a. *kidin ku-le- damy- a wa-ka (kusudi wa-dede)*
 7chair-LOC 17-PST-sit- FV 2-woman (so that 2AGRs-talk)
 ‘On the chair sat women (so that they talk)’
- b. *duke-n ku- le- orok- a wa-na (kusudi waure chumbi)*
 5shop-LOC 17- PST- stand- FV -child (so that they buy salt)
 ‘In/at the shop stood women (so that they buy salt)’

- c. *nfongo-n ku- le- ongom-a waka (kusudi wane muda)*
 3stream-LOC 17- PST- bend- FV 2-woman (so that they drink water)
 ‘To the stream bent women (so that they drink water)’
- d. *ukuten ku- le- mas- a picha (kusudi ilolyo)*
 11wall-LOC 17- PST- hang- FV 9photo (so that it is seen)
 ‘The wall hung a photo (so that it is seen)’

The goal/location/source without locative morphology as subject

- (188) a. *kidin ki- le- damy- a wa-ka (kusudi wa-dede)*
 9floor 7AGRs-PST- sit- FV 2-woman (so that 2AGRs talk)
 ‘The chair (is the place where) women sat (so that they talk)’
- b. *duka lyi- le- orok- a wa-na (kusudi waure chumbi)*
 5shop 5AGRs-PST- stand- FV -child (so that they buy salt)
 ‘The shop (is the place where) children stood (so that they buy salt)’
- c. *nfongo u- le- ongom-a waka (kusudi wane muda)*
 3stream 9AGRs-PST- bend- FV 2-woman (so that they drink water)
 ‘The stream (is the place where) women bent (so that they drink water)’
- d. *ukuta lu- le- mas- a picha (kusudi ilolyo)*
 11wall 11AGRs-PST- hang- FV 9photo (so that it is seen)
 ‘The wall (is the place where) a photo hung (so that it is seen)’

3.4.6.3 Reason clause modification

The agent/theme argument as subject

- (189) a. *wa-ka wa- le- damy- a kidi-n (ko sababu ya irike)*
 2-woman 2AGRs-PST- sit- FV 7chair-LOCfloor (because of 5hotness)
 ‘Women sat on the chair (because of hotness)’
- b. *wa-na wa- le- orok- a duke-n (kosababu ya mmbo)*
 2-child 2AGRs-PST- stand- FV 5shop-LOC (because of rain)
 ‘Children stood in/at the shop (because of the rain)’
- c. *waka wa- le- ongom-a nfongo-n (ko sababu ya shilo)*
 2-woman 2AGRs-PST- bend- FV 3stream-LOC (because of frogs)
 ‘Women bent to the stream (because of frogs)’

- d. *wa-na wa- le- mas-a picha ukute-n (ko sababu ya bheenu)*
 2-child 2AGRs-PST- hang-FV 9photo 11wall-LOC (because of visitors)
 ‘Children hung a photo on a wall (because of the visitors)’

The goal/location/source argument with locative morphology as subject

- (190) a. *kidi- n ku-le- damy- a wa-ka (ko sababu ya irike)*
 7chair-LOC 17-PST-sit- FV 2-woman (because of 5hotness)
 ‘On the chair sat women (because of hotness)’
- b. *duke-n ku- le- orok- a wa-na (ko sababu ya mmbo)*
 5shop-LOC 17- PST- stand- FV -child (because of rain)
 ‘In/at the shop stood women (because of the rain)’
- c. *nfongo-n ku- le- ongom-a waka (kosababu ya shilo)*
 3stream-LOC 17- PST- bend- FV 2-woman (because of frogs)
 ‘To the stream bent women (because of frogs)’
- d. *ukuten ku- le- mas- a picha (ko sbabau ya bheenu)*
 11wall-LOC 17- PST- hang- FV 9photo (because of visitors)
 ‘The wall hung a photo (because of the visitors)’

The goal/location/source argument without locative morphology as subject

- (191) a. *kidi ki- le- damy- a wa-ka (ko sababu ya irike)*
 7chair 7AGRs-PST- sit- FV 2-woman (because of 5hotness)
 ‘The chair (is the place where) women sat (because of hotness)’
- b. *duka lyi- le- orok- a wa-na (ko sababu ya mmbo)*
 5shop 5AGRs-PST- stand- FV -child (because of rain)
 ‘The shop (is the place where) children stood (because of the rain)’
- c. *nfongo u- le- ongom-a waka (kosababu ya shilo)*
 3stream 3AGRs-PST- bend- FV 2-woman (because of frogs)
 ‘The stream (is the place where) women bent (because of frogs)’
- d. *ukuta lu- le- mas- a picha (kosababu ya bheenu)*
 11wall 11AGRs-PST- hang- FV 9photo (because of visitors)
 ‘The wall (is the place where) a photo hung (because of the visitors)’

3.4.6.4 Manner/Instrument adjunct modification

The agent/theme argument as subject

- (192) a. *wa-ka wa- le- damy- a kidi- n (ko woou)/(na nsenge)*
 2-woman 2AGRs-PST- sit- FV 7chair-LOC (with fear)/(by 4walking stick)
 ‘Women sat on the chair (fearful)/ (by means of a walking stick)’
- b. *wa-na wa- le- orok- a duke-n (sau)/(na ikari)*
 2-child 2AGRs-PST- stand- FV 5shop-LOC (quietly)/ (by car)
 ‘Children stood in/at the shop (quietly)/ (by means of a car)’
- c. *waka wa- le- ongom-a nfongo-n (mbonngo)*
 2-woman 2AGRs-PST- bend- FV 3stream-LOC (carefully)
 ‘Women bent to the stream (carefully)’
- d. *wa-na wa- le- mas-a picha ukute-n (nicha)/(na ngasi)*
 2-child 2AGRs-PST- hang-FV 9photo 11wall-LOC (nice)/ (by ladder)
 ‘Children hung a photo on a wall (nicely)/ (by means of a ladder)’

The goal/location/source argument (with locative morphology) as subject

- (193) a. *kidi- n ku-le- damy- a wa-ka (ko woou)/na nsenge)*
 7chair-LOC 17-PST-sit- FV 2-woman (fearful)/ (by 4walking stick)
 ‘On the chair sat women (fearful)/ (by means of a walking stick)’
- b. *duke-n ku- le- orok- a wa-na (sau)/(na ikari)*
 5shop-LOC 17- PST- stand- FV -child (quite)/(by car)
 ‘In/at the shop stood women (quietly)/ (by means of a car)’
- c. *nfongo-n ku- le- ongom-a waka (mbonngo)*
 3stream-LOC 17- PST- bend- FV 2-woman (carefully)
 ‘To the stream bent women (carefully)’
- d. *ukuten ku- le- mas- a picha (nicha)/(na ngasi)*
 11wall-LOC 17- PST- hang- FV 9photo (nice)/ (by ladder)
 ‘The wall hung a photo (nicely)/ (by means of a ladder)’

The goal/location/source argument without locative morphology as subject

- (194) a. *kidi ki- le- damy- a wa-ka (ko woou)/(na nsenge)*

7chair 7AGRs-PST- sit- FV 2-woman (with fear)/ (by 4walking stick)
 ‘The chair (is the place where women sat’ (fearful)/ (by means of a walking stick)’

- b. *duka lyi- le- orok- a wa-na (sau)/(neekari)*
 5shop 5AGRs-PST- stand- FV -child (quite)/ (by car)
 ‘The shop (is the place where) children stood (quietly)/ (by means of a car)’
- c. *nfongo u- le- ongom-a waka (mbonngo)*
 3stream 3AGRs-PST- bend- FV 2-woman (carefully)
 ‘The stream (is the place where) women bent (carefully)’
- d. *ukuta lu- le- mas- a picha (nicha)/(na ngasi)*
 11wall 11AGRs-PST- hang- FV 9photo (nice)/(by ladder)
 ‘The wall (is the place where) a photo hung (nicely)/ (by means of a ladder)’

3.4.6.5 Temporal adverbials

The agent/theme argument as subject

- (195) a. *wa-ka wa- le- damy- a kidi-n (ko masaa adadu/masaa adadu)*
 2-woman 2AGRs-PST- sit- FV 7chair-LOC (for three hours/in three hours)
 ‘Women sat on the chair (for three hours/in three hours)’
- b. *wa-na wa- le- orok- a duke-n (ko isaa)/(isaa)*
 2-child 2AGRs-PST- stand- FV 5shop-LOC (for hour)/ (hour)
 ‘Children stood in/at the shop (for an hour)/ (in an hour)’
- c. *waka wa- le- ongom-a nfongo-n (ko dakika)/(dakika)*
 2-woman 2AGRs-PST- bend- FV 3stream-LOC (for minute)/ (minute)
 ‘Women bent to the stream (for a minute)/ (in a minute)’
- d. *wa-na wa- le- mas-a picha ukute-n (ko dakika)/(dakika)*
 2-child 2AGRs-PST- hang-FV 9photo 11wall-LOC (for minute)/ (minute)
 ‘Children hung a photo on a wall (for a minute/in a minute)’

The goal/location/source argument with locative morphology as subject

- (196) a. *kidi- n ku-le- damy- a wa-ka (masaa adadu)/(masaa adadu)*
 7chair-LOC 17-PST-sit- FV 2-woman (for hours three)/(hours three)
 ‘On the chair sat women (for three hours)/ (in three hours)’

- b. *duke-n ku- le- orok- a wa-na (ko isaa)/(isaa)*
 5shop-LOC 17- PST- stand- FV -child (for hour)/(hour)
 ‘In/at the shop stood women (for an hour)/ (in an hour)’
- c. *nfongo-n ku- le- ongom-a waka (ko dakika)/(dakika)*
 3stream-LOC 17- PST- bend- FV 2-woman (for minute)/(minute)
 ‘To the stream bent women (for a minute)/ (in a minute)’
- d. *ukuten ku- le- mas- a picha (ko dakika)/(dakika)*
 11wall-LOC 17- PST- hang- FV 9photo (for minute)/(minute)
 ‘On the wall hung a photo (for a minute)/ (in minute)’

The goal/location/source without locative morphology as subject

- (197) a. *kidi ki- le- damy- a wa-ka (ko masaa adadu)/(masaa adadu)*
 7chair 7AGRs-PST- sit -FV 2-woman (for hours three)/(hours three)
 ‘The chair (is the place where) women sat (for three hours)/ (in three hours)’
- b. *duka lyi- le- orok- a wa-na (ko isaa)/(isaa)*
 5shop 5AGRs-PST- stand- FV -child (for hour)/(hour)
 ‘The shop (is the place where) children stood (for an hour)/ (in an hour)’
- c. *nfongo u- le- ongom-a waka (ko dakika)/(dakika)*
 3stream 3AGRs-PST- bend- FV 2-woman (for minute)/(minute)
 ‘The stream (is the place where) women bent (for a minute)/ (in a minute)’
- d. *ukuta lu- le- mas- a picha (ko dakika)/(dakika)*
 11wall 11AGRs-PST- hang- FV 9photo (for minute)/(minute)
 ‘The wall (is the place where) a photo hung (for a minute)/(in a minute)’

3.4.6.6 Causing event modification

The agent/theme argument as subject

- (198) a. *wa-ka wa- le- damy- a kidi- n (ko i-lasimish-o)*
 2-woman 2AGRs-PST- sit- FV 7chair-LOC (by INF-force-PASS)
 ‘Women sat on the floor (by been forced)’
- b. *wa-na wa- le- orok- a duke-n (kweeowo mmbo)*
 2-child 2AGRs-PST- stand- FV 5shop-LOC (by fearing rain)
 ‘Children stood in/at the shop (by fearing the rain)’

- c. *waka wa- le- ongom-a nfongo-n (kweelolya shilo)*
 2-woman 2AGRs-PST- bend- FV 3stream-LOC (by spotting frogs)
 ‘Women bent to the stream (by spotting the frogs)’
- d. *wa-na wa- le- mas-a picha ukute-n (kweelolya bheenu)*
 2-child 2AGRs-PST- hang-FV 9photo 11wall-LOC (by seeing visitors)
 ‘Children hung a photo on a wall (by seeing the visitors)’

The goal/location/source with locative morphology as subject

- (199) a. *kidin ku-le- damy- a wa-ka (ko i-lasimish-o)*
 7chair-LOC 17-PST-sit- FV 2-woman (by INF-force-PASS)
 ‘On the chair sat women (by been forced)’
- b. *duke-n ku- le- orok- a wa-na (kweeowo mmbo)*
 5shop-LOC 17- PST- stand- FV -child (by fearing rain)
 ‘In/at the shop stood women (by fearing the rain)’
- c. *nfongo-n ku- le- ongom-a waka (kweelolya shilo)*
 3stream-LOC 17- PST- bend- FV 2-woman (by spotting frogs)
 ‘To the stream bent women (by spotting frogs)’
- d. *ukuten ku- le- mas- a picha (kweelolya bheenu)*
 11wall-LOC 17- PST- hang- FV 9photo (by seeing visitors)
 ‘The wall hung a photo (by seeing the visitors)’

The goal/location/source argument without locative morphology as subject

- (200) a. *kidi ki- le- damy- a wa-ka (ko i-lasimish-o)*
 7chair 7AGRs-PST- sit- FV 2-woman (by INF-force-PASS)
 ‘The chair (is the place where) women sat (by been forced)’
- b. *duka lyi- le- orok- a wa-na (kweeowo mmbo)*
 5shop 5AGRs-PST- stand- FV -child (by fearing rain)
 ‘The shop (is the place where) children stood (by fearing the rain)’
- c. *nfongo u- le- ongom-a waka (kweelolya shilo)*
 3stream 3AGRs-PST- bend- FV 2-woman (by spotting frogs)
 ‘The stream (is the place where) women bent (by spotting frogs)’
- d. *ukuta lu- le- mas- a picha (kweelolya bheenu)*

11wall 11AGRs-PST- hang- FV 9photo (by seeing visitors)
 ‘The wall (is the place where) a photo hung (by seeing the visitors)’

3.4.7 Applicative-locative sentences

- (201) a. **wa-ka wa- le- damy- i- a kidi- n*
 2-woman 2AGRs-PST- sit- APPL-FV 7chair-LOC
 ‘*Women were sat by on the chair’
- b. **kidi ki- le- damy- i a wa-ka*
 7chair 7AGRs-PST- sit- APPL- FV 2-woman
 ‘The chair (is the place where) sat for the women’
- c. **kidin ku-le- damy- i a wa-ka*
 7chair-LOC 17-PST-sit- APPL-FV 2-woman
 ‘*On the chair sat for the women’
- (202) a. **wandu wa- le- orok- i- a duke-n*
 2-people 2AGRs-PST- stand- APPL- FV 5shop-LOC
 ‘*people stood for in the shop’
- b. **duke-n ku- le- orok- i- a wa-ndu*
 5shop-LOC 17AGRs-PST-stand- APPL-FV 2-people
 ‘*Into the shop stood for the people’
- c. **duka lyi- le- orok- i- a wa-ndu*
 5shop 5AGRs-PST- stand- APPL-FV 2-people
 ‘*The shop is the place where stood for the people’

3.5 Change of state verbs

3.5.1 The agent/theme argument as subject

- (203) a. *wa-ka wa- le- kor- a kelya ruko- n*
 2-woman 2AGRs-PST- cook- FV 7food 9kitchen-LOC
 ‘Women cooked food in the kitchen’
- b. *womi wa- le- tan- a mmba nlime-n*
 2-man 2AGRs-PST- build- FV 9house 3mountain-LOC
 ‘Men built the house on/at the mountain’

- c. *wa-na* *wa-* *le-* *som-a* *kitabu mese-n*
 2-man 2AGRs-PST- read-FV 7book 9table-LOC
 ‘Children read a book on the table’
- d. *wa-ndu wa-* *le-* *ly-* *a* *kelya bo*
 2-man 2AGRs-PST- read- FV 7food 9home
 ‘People eat food at home’

3.5.2 The goal/location argument (with locative morphology) as subject

- (204) a. *ruko- n* *ku-* *le-* *kor-* *a* *kelya*
 9kitchen-LOC 17- PST- cook- FV 7food
 ‘In the kitchen cooked food’
- b. *nlime-n* *ku-* *le-* *tan-* *a* *mmba*
 3mountain-LOC 17- PST- build- FV 9house
 ‘On/at the mountain built the house’
- c. *mese-n* *ku-* *le-* *som-a* *kitabu*
 9table-LOC 17- PST- read-FV 7book
 ‘On the table read a book’
- d. *?bo* *ku-* *le-* *ly-* *a* *kelya*
 9home 17- PST- eat- FV 7food
 ‘At home ate the food’

The goal/location argument in passive verb constructions

- (205) a. *ruko-n* *ku-* *le-* *kor-* *o* *kelya*
 9kitchen- LOC 17- PST- cook- PASS 7food
 ‘In the kitchen was cooked food’
- b. *nlime-n* *ku-* *le-* *tan-* *o* *mmba*
 3mountain-LOC 17- PST- build- PASS 9house
 ‘On/at the mountain was built the house’
- c. *mese-n* *ku-* *le-* *som-o* *kitabu*
 9table-LOC 17- PST- read-PASS 7book
 ‘On the table was read book’

- d. *bo ku- le- ly- o kelya*
 9home 17- PST- eat- PASS 7food
 ‘At home was eaten some food’

The goal/location argument in relative clauses

- (206) a. *ruko- n ku- le- kor- a kelya ku-fane*
 9kitchen-LOC 17- PST- cook- FV 7food 17-dirty
 ‘In the kitchen where food was cooked is dirty’
- b. *nlime-n ku- le- tan- a mmba ku-leeye*
 3mountain-LOC 17- PST- build- FV 9house 17-far
 ‘On/at the mountain where house was built is far’
- c. *mese-n ku- le- som-a kitabu ku-fane*
 9table-LOC 17- PST- read-FV 7book 17-dirty
 ‘On the table where book was read is dirty’
- d. *bo ku- le- ly- a kelya ku-iho ufina*
 9home 17- PST- eat- FV 7food 17-be-dance
 ‘At home where food was eaten there is dance’

3.5.3 The goal/location argument (without locative morphology) as subject

- (207) a. *ruko lyi- le- kor- a kelya*
 9pot 9AGRs-PST- cook- FV 7food
 ‘Kitchen (is the place where) food cooked’
- b. *nlima u- le- tan- a mmba*
 3mountain 3AGRs-PST- build- FV 9house
 ‘The mountain (is the place where) built house’
- c. *mesa i- le- som-a kitabu*
 9table 9AGRs-PST- read-FV 7book
 ‘The table (is the place where) read book’
- d. *?bo i- le- ly- a kelya*
 9home 9AGRs-PST- eat- FV 7food
 ‘Home (is the place where) ate food’

The goal/location argument in passive verb constructions

- (208) a. *ruko lyi- le- kor- o kelya*
 9kitchen 9AGRs-PST- cook- PASS 7food
 ‘The kitchen (is the place where) food was cooked’
- b. *nlima u- le- tan- o mmba*
 3mountain 3AGRs-PST- build- PASS 9house
 ‘The mountain (is the place where) house was built’
- c. *mesa i- le- som-o kitabu*
 9table -9AGRsPST- read-PASS 7book
 ‘The table (is the place where) book was read’
- d. *bo i- le- ly- o kelya*
 9home 9AGRs-PST- eat- PASS 7food
 ‘Home (is the place where) food was eaten’

The goal/location argument in relative clauses

- (209) a. *ruko lyi- le- kor- a kelya lyi-fane*
 9kitchen 9AGRs-PST- cook- FV 7food 9-dirty
 ‘The kitchen (the place where) food was cooked is dirty’
- b. *nlima u- le- tan- a mmba u-leeye*
 3mountain 3AGRs-PST- build- FV 9house 3-high
 ‘The mountain (the place where) house was built is high’
- c. *mesa i- le- som-a kitabu i-fane*
 9table 9AGRs-PST- read-FV 7book 9-dirty
 ‘The table (the place where) book was read is dirty’
- d. *bo i- le- ly- a kelya i-ode ufina*
 9home 9AGRs-PST- eat- FV 7food 9-has dance
 ‘Home (the place where) food was eaten has/there is dance’

3.5.4 Locative subject prefix as expletive

- (210) a. *ku- le kor- a kelya (ruk-on-n)*
 17- PST cook- FV 7food (9kitchen-LOC)
 ‘There cooked food (in the kitchen)’

- b. *ku- le- tan- a mmba (nlime-n)*
 17- PST- build- FV 9house (3mountain-LOC)
 ‘There built the house (on/at the mountain)’
- c. *ku- le- som-a kitabu (mese-n)*
 17- PST- read-FV 7book (9table-LOC)
 ‘There read book(on the table)’
- d. *?ku- le- ly- a kelya (bo)*
 17- PST- eat- FV 7food (9home)
 ‘There ate the food(at home)’

3.5.5 The agent/theme and the goal/location arguments with other modifiers

3.5.5.1 Agent-oriented adverbial modification

The agent/theme argument as subject

- (211) a. *wa-ka wa- le- kor- a kelya ruko-n (ko makusudi)*
 2-woman 2AGRs-PST- cook- FV 7food 9kitchen-LOC (with purpose)
 ‘Women cooked food in the kitchen (intentionally)’
- b. *womi wa- le- tan- a mmba nlime-n (kirango)*
 2-man 2AGRs-PST- build- FV 9house 3mountain-LOC (with skill)
 ‘Men built the house on/at the mountain (skillfully)’
- c. *wa-na wa- le- som-a kitabu mese-n (ko makusudi)*
 2-man 2AGRs-PST- read-FV 7book 9table-LOC (with purpose)
 ‘Children read a book on the table (deliberately)’
- d. *wa-ndu wa- le- ly- a kelya bo (ko nashi)*
 2-man 2AGRs-PST- read- FV 7food 9home (with pride)
 ‘People eat food at home (proudly)’

3.5.5.2 Prepositional phrase modification

- (212) a. *ruko-n ku- le- kor- a kelya (ko waka)/ (*na waka)*
 9kitchen-LOC 17- PST- cook- FV 7food (to 2-woman)/ (*by 2-woman)
 ‘In the kitchen cooked food (to the ability/potentiality of women)/ (*by women)’
- b. *ruko-n ku- le- kor- o kelya (na waka)/ (*ko waka)*
 9kitchen-LOC 17- PST- cook- PASS 7food (by 2-woman)/ (*to 2-woman)

‘In the kitchen was cooked food (by women)/ (*to women)’

3.5.5.3 Purpose phrase/clause modification

The agent/theme argument as subject

- (213) a. *wa-ka wa- le- kor- a kelya ruko-n (kusudi kishe nicha)*
 2-woman 2AGRs-PST- cook- FV 7food 9kitchen-LOC (so that 7-cook well)
 ‘Women cooked food in the kitchen (so that it cooks well)’
- b. *womi wa- le- tan- a mmba nlime-n (kusudi ilolyo)*
 2-man 2AGRs-PST- build- FV 9house 3mountain-LOC (so that it is seen)
 ‘Men built the house on/at the mountain (so that it is viewed)’
- c. *wa-na wa- le- som-a kitabu mese-n (kusudi walarengeye)*
 2-man 2AGRs-PST- read-FV 7book 9table-LOC (so that they do not doze)
 ‘Children read a book on the table (so that they do not doze)’
- d. *wa-ndu wa- le- ly- a kelya bo kusudi wamiku walaswye)*
 2-man 2AGRs-PST- read- FV 7food 9home (so that elders do feel sad)
 ‘People eat food at home (so that elders do not feel sad)’

The goal/location/source argument with locative morphology as subject

- (214) a. *ruko-n ku- le- kor- a kelya (kusudi kishe nicha)*
 9kitchen-LOC 17- PST- cook- FV 7food (so that it cooks well)
 ‘In the kitchen cooked food (so that it cooks well)’
- b. *nlime-n ku- le- tan- a mmba (kusudi ilolyo)*
 3mountain-LOC 17- PST- build- FV 9house (so that it is seen)
 ‘On/at the mountain built the house (so that it is viewed)’
- c. *mese-n ku- le- som-a kitabu (kusudi wana walarengeye)*
 9table-LOC 17- PST- read-FV 7book (so that children do not doze)
 ‘On the table read a book (so that children do not doze)’
- d. *?bo ku- le- ly- a kelya (kusudi wamiku walaswye)*
 9home 17- PST- eat- FV 7food (so that elders do not feel sad)
 ‘At home ate the food (so that elders do not feel sad)’

The goal/location/source argument(without locative morphology) as subject

- (215) a. *ruko lyi- le- kor- a kelya (kusudi kishe nicha)*
 9kitchen 9AGRs-PST- cook- FV 7food (so that it cooks well)
 ‘The kitchen (is the place where) food cooked (so that it cooks well)’
- b. *nlima u- le- tan- a mmba (kusudi ilolyo)*
 3mountain 3AGRs-PST- build- FV 9house (so that it is seen)
 ‘The mountain (is the place where) built house (so that it is viewed)’
- c. *mesa i- le- som-a kitabu (kusudi wana walarengeye)*
 9table 9AGRs-PST- read-FV 7book (so that children do not doze)
 ‘The table (is the place where) read book (so that children do not doze)’
- d. *?bo i- le- ly- a kelya (kusudi wamiku walasweye)*
 9home 9AGRs-PST- eat- FV 7food (so that elders do not feel sad)
 ‘Home (is the place where) ate food (so that elders do not feel sad)’

3.5.5.4 Reason phrase/clause modification**The agent/theme argument as subject**

- (216) a. *wa-ka wa- le- kor- a kelya rukon-n (ko sababu ya mmbo)*
 2-woman 2AGRs-PST- cook- FV 7food 9kitchen-LOC (because of rain)
 ‘Women cooked food in the kitchen (because of rain)’
- b. *womi wa- le- tan- a mmba nlime-n (kosababu ya sifa)*
 2-man 2AGRs-PST- build- FV 9house 3mountain-LOC (because of pride)
 ‘Men built the house on/at the mountain (because of arrogance)’
- c. *wa-na wa- le- som-a kitabu mese-n (kosababu ya taa)*
 2-man 2AGRs-PST- read-FV 7book 9table-LOC (because of light)
 ‘Children read a book on the table (because of the light)’
- d. *wa-ndu wa- le- ly- a kelya bo (kosababu ya chaa)*
 2-man 2AGRs-PST- read- FV 7food 9home (because of appetite)
 ‘People eat food at home (because of appetite)’

The goal/location/source argument (with locative morphology) as subject

- (217) a. *ruko-n ku- le- kor- a kelya (kosababu ya mudo)*

9kitchen-LOC 17- PST- cook- FV 7food (because of fire)

‘In the kitchen cooked food (because of fire)’

- b. *nlime-n ku- le- tan- a mmba (kosababu ya sifa)*
 3mountain-LOC 17- PST- build- FV 9house (because of arrogance)
 ‘On/at the mountain built the house (because of arrogance)’
- c. *mese-n ku- le- som-a kitabu (kosababu ya taa)*
 9table-LOC 17- PST- read-FV 7book (because of light)
 ‘On the table read a book (because of the light)’
- d. *?bo ku- le- ly- a kelya (kosababu ya chaa)*
 9home 17- PST- eat- FV 7food (because of appetite)
 ‘At home ate the food (because of appetite)’

The goal/location/source (without locative morphology) as subject

- (218) a. *ruko lyi- le- kor- a kelya (ko sababu ya mmbo)*
 9kitchen 9AGRs-PST- cook- FV 7food (because of rain)
 ‘The kitchen (is the place where) food cooked (because of the rain)’
- b. *nlima u- le- tan- a mmba (kosababu ya sifa)*
 3mountain 3AGRs-PST- build- FV 9house (because of arrogance)
 ‘The mountain (is the place where) built house (because of arrogance)’
- c. *mesa i- le- som-a kitabu (kosababu ya taa)*
 9table 9AGRs-PST- read-FV 7book (because of light)
 ‘The table (is the place where) read book (because of light)’
- d. *?bo i- le- ly- a kelya (kosababu ya chaa)*
 9home 9AGRs-PST- eat- FV 7food (because of appetite)
 ‘Home (is the place where) ate food (because of appetite)’

3.5.5.5 Temporal adverbial modification

The agent/theme argument as subject

- (219) a. *wa-ka wa- le- kor- a kelya ruko-n (ko nusu saa)/*
(nusu saa)
 2-woman 2AGRs-PST- cook- FV 7food 9kitchen-LOC (for half hour)/
 (half hour)

‘Women cooked food in the kitchen (for half an hour)/ (in half an hour)’

- b. *womi wa- le- tan- a mmba nlime-n(ko mooka)/(mooka)*
 2-man 2AGRs-PST- build- FV 9house 3mountain-LOC (for year)/ (year)
 ‘Men built the house on/at the mountain (for a year)/ (in a year)’
- c. *wa-na wa- le- som-a kitabu mese-n (ko isaa)/(isaa)*
 2-man 2AGRs-PST- read-FV 7book 9table-LOC (for hour)/ (hour)
 ‘Children read a book on the table (for an hour)/ (in hour)’
- d. *wa-ndu wa- le- ly- a kelya bo (ko dakika)/(dakika)*
 2-man 2AGRs-PST- read- FV 7food 9home (for minute)/ (minute)
 ‘People eat food at home(for a minute)/ (in a minute)’

The goal/location/source argument (with locative morphology) as subject

- (220) a. *ruko-n ku- le- kor- a kelya (ko nusu saa)/(nusu saa)*
 9kitchen-LOC 17- PST- cook- FV 7food (for half hour)/ (half hour)
 ‘In the kitchen cooked food (for half an hour)/ (in half an hour)’
- b. *nlime-n ku- le- tan- a mmba(ko mooka)/(mooka)*
 3mountain-LOC17- PST- build- FV 9house (for year)/ (year)
 ‘On/at the mountain built the house (for a year)/ (in a year)’
- c. *mese-n ku- le- som-a kitabu (ko isaa)/(isaa)*
 9table-LOC 17- PST- read-FV 7book (for hour)/ (hour)
 ‘On the table read a book (for an hour)/ (in an hour)’
- d. *?bo ku- le- ly- a kelya(ko dakika)/(dakika)*
 9home 17- PST- eat- FV 7food(for minute)/ (mimute)
 ‘At home ate the food (for a minute)/ (mimute)’

The goal/location/source argument (without locative morphology) as subject

- (221) a. *ruko lyi- le- kor- a kelya (ko nusu saa)/(nusu saa)*
 9kitchen9AGRs-PST- cook- FV 7food (for half hour)/ (half (hour))
 ‘The kitchen (is the place where) food cooked (for half an hour)/ (in half an hour)’
- b. *nlima u- le- tan- a mmba (ko mooka)/(mooka)*
 3mountain 3AGRs-PST- build- FV 9house (for year)/ (year)
 ‘The mountain (is the place where) built house (for a year)/ (in a year)’

- c. *mesa i- le- som-a kitabu (ko isaa)/ (isaa)*
 9table 9AGRs-PST- read-FV 7book (for hour)/ (hour)
 ‘The table (is the place where) read book (for an hour)/ (in an hour)’
- d. *?bo i- le- ly- a kelya (ko dakika)/ (dakika)*
 9home 9AGRs-PST- eat- FV 7food (for minute)/ (minute)
 ‘Home (is the place where) ate food (for a minute)/ (in a minute)’

3.5.5.6 Manner/Instrument modification

The agent/theme argument as subject

- (223) a. *wa-ka wa- le- kor- a kelya ruko-n(nicha)/(na makaa)*
 2-woman 2AGRs-PST- cook- FV 7food 9kitchen-LOC(nice)/ (with
 charchoal)
 ‘Women cooked food in the kitchen (nicely)/ (by means of charchoal)’
- b. *womi wa- le- tan- a mmba nlime-n (nicha) (na mawee)*
 2-man 2AGRs-PST- build- FV 9house 3mountain-LOC (nice)/(with 6stones)
 ‘Men built the house on/at the mountain (nicely)/ (by the use of stones)’
- c. *wa-na wa- le- som-a kitabu mese-n (sau)/ (na taa)*
 2-man 2AGRs-PST- read-FV 7book 9table-LOC (quite)/ (with lamp)
 ‘Children read a book on the table (quietly)/ (by the use of a lamp)’
- d. *wa-ndu wa- le- ly- a kelya bo (uwin) / (na shiliko)*
 2-man 2AGRs-PST- read- FV 7food 9home (fast)/ (with spoons)
 ‘People eat food at home (fast)/ (by means of spoons)’

The goal/location/source with locative morphology as subject

- (224) a. *ruko-n ku- le- kor- a kelya (nicha)/(na makaa)*
 9kitchen-LOC 17- PST- cook- FV 7food (nice)/(with 6charchol)
 ‘In the kitchen cooked food (nicely)/ (by means of charchoal)’
- b. *nlime-n ku- le- tan- a mmba (nicha) (na mawee)*
 3mountain-LOC 17- PST- build- FV 9house (nice)/ (with 6stones)
 ‘On/at the mountain built the house (nicely)/(by the use of stones)
- c. *mese-n ku- le- som-a kitabu (sau)/ (na taa)*
 9table-LOC 17- PST- read-FV 7book (quite)/ (with lamp)

‘On the table read a book (quietly)/ (by the use of a lamp)’

- d. ?bo ku- le- ly- a kelya (uwin) /(na shiliko)
 9home 17- PST- eat- FV 7food (fast)/ (with spoons)

‘At home ate the food (fast)/ (by means of spoons)’

The goal/location/source without locative morphology as subject

- (225) a. ruko lyi- le- kor- a kelya (nicha)/(na makaa)
 9kitchen 9AGRs-PST- cook- FV 7food (nice)/(with 6charcoal)
 ‘The kitchen (is the place where) food cooked (nicely)/ (by means of charcoal)’
- b. nlima u- le- tan- a mmba(nicha) (na mawee)
 3mountain 3AGRs-PST- build- FV 9house (nice)/ (with 6stones)
 ‘The mountain (is the place where) built house (nicely)/ (by the use of stones)’
- c. mesa i- le- som-a kitab (sau)/ (na taa)
 9table 9AGRs-PST- read-FV 7book (quite)/ (with lamp)
 ‘The table (is the place where) read book (quietly)/ (by the use of a lamp)’
- d. ?bo i- le- ly- a kelya (uwin) /(na shiliko)
 9home 9AGRs-PST- eat- FV 7food (fast)/ (with spoons)
 ‘Home (is the place where) ate food (fast)/ (with the use of spoons)’

3.5.7 Applicative-locative constructions

- (226) a. wa-ka wa- le- kor- i a kelya ruko-n
 2-woman 2AGRs-PST- cook-APPL FV 7food 9kitchen-LOC
 ‘Women cooked food (exclusively) in the kitchen’
- b. ruko-n ku- le- kor- i a kelya
 9kitchen-LOC 17- PST- cook-APPL FV 7food
 ‘In the kitchen (exclusively) cooked food’
- c. ruko lyi- le- kor- i a kelya
 9kitchen 9AGRs-PST- cook-APPL FV 7food
 ‘Kitchen (is the exclusive place where) food cooked’